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ABSTRACT

Data contained in this report were collected using the National Science Foundation's (NSF) fiscal year 1996 academic research and development expenditures survey and refer to science and engineering expenditures for separately budgeted research and development (R&D). R&D expenditures were collected from 493 institutions of higher education in the United States and outlying areas. The survey questionnaire consisted of four main items. Item 1 requested that institutions report their total current expenditures for separately budgeted science and engineering R&D for all activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit, i.e., research centers within the institution by source of funds. Item 1A requested total and federally-financed current fund expenditures for separately budgeted science and engineering R&D passed through the institution to subrecipients. Item 2 requested total and federally-financed current fund expenditures for separately budgeted science and engineering R&D activities by detailed science and engineering fields. Item 3 addressed the portions of total and federally-financed expenditures reported in Items 1 and 2 that were used for purchasing research equipment out of current funds. This publication is comprised of technical notes, detailed statistical tables, a list of university-administered, federally-funded R&D centers for fiscal year 1996, and the survey instruments. (PVD)

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ED 418 841

Academic Research and Development Expenditures:

Fiscal Year 1996

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Detailed Statistical Tables

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Division of Science Resources Studies
Directorate for Social, Behavioral, and Economic Sciences

National Science Foundation

NSF 98-304

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Academic Research and Development Expenditures:

Fiscal Year 1996

Detailed Statistical Tables

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Division of Science Resources Studies
Directorate for Social, Behavioral, and Economic Sciences

National Science Foundation

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Contributors

Data collection, preparation, and tabulations were performed by Quantum Research Corp. for the National Science Foundation. The Project Officer for this report was M. Marge Machen.

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CONTENTS

Section *Page*

GENERAL NOTES vii

A. TECHNICAL NOTES 1
- A1. Scope of the survey 3
- A2. Survey instrument 3
  - A2a. item 1. 3
  - A2b. item 1A. 3
  - A2c. item 2. 3
  - A2d. item 3. 3
- A3. Item 1A analysis 4
- A4. Response rate 5
- A5. National total and imputation 5
- A6. Data anomalies 6
- A7. Highest-degree-granted tables 6
- A8. Sampling, weighting, and standard errors of the estimates 6
- A9. Data availability 7
- A10. Section A. tables 9

B. DETAILED STATISTICAL TABLES 21

C. UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS: FY 1996 189

D. SURVEY INSTRUMENTS 193

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General Notes

The data presented in this report were compiled from the National Science Foundation's (NSF's) fiscal year (FY) 1996 Survey of Research and Development Expenditures at Universities and Colleges (academic R&D expenditures survey). They refer to science and engineering expenditures for separately budgeted research and development (R&D). Terms used in institutional accounting procedures are incorporated throughout the tables.

The term "separately budgeted R&D expenditures" includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. "Expenditures" are funds actually spent by an institution during its fiscal year. "Separately budgeted R&D equipment purchased from current funds" includes all research equipment purchased under sponsored research project awards.

"Federally funded research and development centers" (FFRDCs) are R&D-performing organizations that range from the traditional contractor-owned/contractor-operated or Government-owned/contractor-operated organizational structures to various degrees of contractor/Government control and ownership. FFRDCs are formed to achieve particular Federal R&D objectives that cannot be met as effectively by existing organizations.

The terms "imputation" and "imputed data" refer to the computerized process by which NSF develops estimates of data when institutions do not furnish the information upon request. Using this process, estimates are developed that are based primarily on key data items reported in prior years' surveys when available. When not available, estimates are based on figures derived from data of respondent institutions that have similar characteristics, including highest degree granted and type of institutional control (public or private). In this publication, the letter "i" is used to identify imputed data and the letter "e" is used when institutional respondents indicated that their data were estimated, or when data required slight mathematical adjustments.

Data presented in trend tables are assembled from the most recently completed survey cycle. Since prior years' data are reviewed for consistency with current year responses and, when necessary, are revised in consultation with institutional respondents, references to prior years' data should be restricted to this document.

Requests for additional information concerning the survey findings for the current or prior surveys should be directed to M. Marge Machen at—

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Section A.

Technical Notes

Scope of the Survey

Data for the National Science Foundation's (NSF's) fiscal year (FY) 1996 report on research and development (R&D) expenditures were collected from 493 institutions of higher education in the United States and Outlying Areas. These institutions were selected from the universe of 674 schools that have doctoral programs in science and engineering (S&E), are historically black colleges or universities that expend any amount of separately budgeted R&D in S&E, or are other institutions that expend at least $50,000 in separately budgeted R&D in S&E.

In addition, the survey includes 18 federally funded research and development centers (FFRDCs). To qualify, an FFRDC must be engaged in basic or applied research, development, or management of R&D activities, and the results of these activities must be directly monitored by the Federal Government—usually a single agency—in a relationship expected to be maintained on a long-term basis. The center must be operated, managed, and administered by either a university or consortium of universities as an autonomous organization or as an identifiable separate operating unit of its parent institution. Finally, 70 percent or more of the center's financial support must be received from the Federal Government.

Although the same survey form (NSF Form 411) is used to collect data from both academic institutions and FFRDCs, the resulting data are presented separately in this report. The survey population was reviewed prior to mailing the questionnaires to ensure that each institutional classification was accurate. Characteristics of the schools were reviewed before and during the course of the survey to determine if changes had occurred (i.e., in highest degree granted or in terms of school openings, closings, or mergers).

Survey Instrument

Most major R&D performers have incorporated into their recordkeeping systems the data that are essential to complete this survey, thereby ensuring a consistent format from one year to the next. Such consistency yields the most useful statistics for time series. As a rule, information to complete this questionnaire is found within the institutions' year-end accounting records.

The survey questionnaire consists of four main items:

Item 1 is a request that institutions report their total current expenditures for separately budgeted science and engineering R&D for all activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit, i.e., research centers, within the institution by source of funds. In addition, schools are asked to provide the percentage of the total and the federally financed expenditures that are considered basic research. Included also are research funds for which an outside organization, educational or other, is a subrecipient. Care should be observed when interpreting data on source of funds; for example, industry R&D support is limited to grants and contracts for R&D activities from profit-making organizations, and the total reported excludes research funded through unrestricted accounts and from corporate foundations, endowments, and fellowships to students. An increasing number of institutions have linkages with industry and foundations via subcontracts, thus complicating the identification of funding source. In addition, institutional policy may determine whether unrestricted state support is reported as state or as institutional funding.

Item 1A, first added in this FY 1996 survey, is a request for total and federally financed current fund expenditures for separately budgeted science and engineering R&D passed through the institution to subrecipients. Schools were asked to break out the subrecipient category by "educational" and "other."

Item 2 is a request for total and federally financed current fund expenditures for separately budgeted R&D activities by detailed S&E fields. Major fields remain unchanged from the FY 1994 questionnaire. When interpreting these data at the detailed discipline level, users should keep in mind that there is considerable interdisciplinary activity and/or overlap among subdisciplines.

Item 3 is a request for the portions of total and federally financed expenditures reported in items 1 and 2 that were used for the purchase of research equipment out of current funds. This portion includes all research equipment purchased under sponsored research project awards and disbursed in the same

detailed disciplines as in item 2. These data are of special interest to Federal and institutional policymakers in determining current funding levels for scientific research instrumentation.

ITEM 1A ANALYSIS

Because the responses to this item are not published in any of the Detailed Statistical Tables, a summary is presented here and in the following table. This item was completed by 88 percent of the respondents. The total R&D expenditures to subrecipients, $770 million, represented 3.8 percent of the item 1A respondents' total R&D expenditures. The doctorate-granting institutions reported a slightly higher percentage of pass-through funds than did the non-doctorate-granting institutions. Item 1A respondents from doctorate-granting institutions reported $762 million, or 3.8 percent, of their total R&D expenditures were passed through to subrecipients, versus $7.9 million or 3.4 percent of item 1A non-doctorate-granting respondents. Item 1A respondents from private institutions reported a higher percentage (5.7 percent) of pass-through funds than those from public institutions (3.0 percent). Respondents to this question reported $628 million of Federal R&D funds—or 4.6 percent of their $13.6 billion Federal support total was passed through to subrecipients.

FY 1996 Item 1A Summary for Total Academic R&D Expenditures

(Dollars in Thousands)

Degree and Control	All Respondents Survey R&D	Item 1A Respondents' Total R&D	Total R&D Expenditures Subrecipients		
			Educational	Other	Total*
All institutions	22,665,305	20,286,543	369,351	194,023	769,961
Doctorate	22,406,622	20,055,271	362,996	192,506	762,089
Non-doctorate	258,683	231,272	6,355	1,517	7,872
Public	15,291,986	14,402,207	233,500	144,036	437,418
Private	7,373,319	5,884,336	135,851	49,987	332,543

* Some respondents could not break total down into sectors.

FY 1996 Item 1A Summary for Federal Academic R&D Expenditures

(Dollars in Thousands)

Degree and Control	All Respondents Federal R&D	Item 1A Respondents' Federal R&D	Federal R&D Expenditures Subrecipients		
			Educational	Other	Total*
All institutions	13,593,513	12,097,625	324,730	191,943	628,446
Doctorate	13,424,103	11,945,083	318,605	190,502	620,880
Non-doctorate	169,410	152,542	6,125	1,441	7,566
Public	8,256,972	7,879,021	201,281	146,425	367,610
Private	5,336,541	4,218,604	123,449	45,518	260,836

* Some respondents could not break total down into sectors.

Response Rate

The FY 1996 survey questionnaires were mailed in January 1997. Every effort was made to maintain close contact with respondents in order to preserve both consistency and continuity in the resultant data. Questionnaires were carefully examined for completeness upon receipt. Computerized facsimiles of the survey data were then prepared for each institution, comparing the current and 2 prior years' data and noting any substantive disparities. These facsimiles were mailed to the respondents so that they could provide revisions before final processing and tabulation of the data.

Respondents were asked to explain significant discrepancies between current and prior years' reporting patterns previously verified as correct. They were encouraged to correct prior years' data if anomalies were identified. When updated or amended figures covering past years were submitted, trend data were correspondingly changed by NSF. Similarly, if a respondent institution underwent an organizational change, such as a merger, NSF incorporated the effects of such changes into prior years' data.

By the survey closing date in mid-July, forms had been received from 480 universities and colleges out of the academic sample population of 493, resulting in a 97.4-percent response rate. Responses were received from 97.7 percent of all doctorate-granting institutions, where 97.8 percent of the estimated national R&D expenditures in S&E fields were disbursed. Also, forms were received from 17 of the 18 FFRDCs. Tables A-1a and A-1b display a detailed breakdown of the response rates by highest degree granted and by sampling stratum (defined later in this section under "Sampling, Weighting, and Standard Errors of the Estimates").

National Total and Imputation

To provide a national estimate for all universities and colleges performing R&D in FY 1996, it was necessary to implement three statistical procedures. First, data were estimated by "imputation" for the 3 percent of the sample population that had not responded by the closing date of the survey. Imputation has been used consistently since FY 1976. Second, data were also imputed for universities and colleges that submitted only partial responses. The imputed total, prior to weighting, was $83 million. Third, the sample total was weighted to compensate for those universities and colleges that were in the survey universe but not in the survey sample. (This procedure is described later under "Sampling, Weighting, and Standard Errors of the Estimates.") This process led to an inflation of $247 million in the national total of R&D expenditures at universities and colleges for FY 1996, resulting in a $22,995 billion total, as shown in table A-2. (The imputed total was inflated to $91 million, as noted in table A-2.)

Tables A-3a and A-3b present breakdowns of both the imputed amounts and the amount of the weighted inflator by broad S&E field. The dollar amount imputed is displayed along with the percentage it represents of the national estimate for universities and colleges in a particular field. Also given is the amount of the weighted inflator for that field. The amount imputed is similarly broken down by source of funds in table A-4.

A significant number of surveyed institutions have been responding only intermittently in past years, providing data one year, not responding for one or more subsequent years, and then providing data again. For the years in which no response was received, data have been imputed as previously described. Although the imputation algorithm accurately reflects national trends, it cannot account for reporting anomalies at individual institutions. For this reason a separate backcasting of prior years' data was performed, following current-year imputation.

For each institution, formerly imputed key variables for items 1 to 3 were compared with subsequent submissions to determine whether the imputed data accurately represent the growth patterns shown by reported data. Re-estimation was applied when the imputed data were not consistent with reported data. If data were reported for FYs 1993 and 1996 but not for the intervening years, for example, the difference between the reported figures for each item total was calculated and evenly distributed across the intervening years (1994–95). The new figures were spread across disciplines (items 2 and 3) or sources of support (item 1) on the basis of the most recent reporting pattern. A clean facsimile was generated for each of the institutions undergoing these procedures and returned to the school for comment. These procedures resulted in much more consistent reporting trends for individual institutions but had little effect upon aggregate figures reflecting national totals.

Data Anomalies

Aggregate academic expenditure data are generally consistent from year to year, although data for individual institutions may vary considerably. Data anomalies may reflect true increases or decreases in expenditures or may be the result of changes in reporting methodology.

Highest-Degree-Granted Tables

Several longitudinal tables display data for institutions whose highest S&E degree granted is at the doctoral level. In tables produced prior to FY 1992, it would have been difficult to identify whether changes in yearly R&D expenditures were caused by changes in expenditure levels or in the number of doctorate-granting institutions. In order to maintain a consistent group of institutions across all years, the highest-degree-granted status for each institution is based on the highest degree granted in the most recent year, FY 1996.

Sampling, Weighting, and Standard Errors of the Estimates

Full population surveys are conducted by NSF every five years. During intervening years, a sample of institutions is drawn and surveyed. Only universities and colleges are included in the sampling frame; all University-Administered FFRDCs are always surveyed. Since a full population survey was conducted in FY 1993, a new sample of institutions was drawn for the FY 1994 survey. This sample will be maintained and resurveyed for FY 1997; the next full population survey will be in FY 1998. Universities and colleges have been divided into the following four sampling strata (three certainty strata and one probability stratum):

(1) **A certainty stratum of doctorate-granting institutions.** This stratum contains 310 universities and colleges that have doctoral programs in S&E. Excluded from this stratum are all doctorate-granting historically black colleges and universities (HBCUs) and university-system campuses.

(2) **A certainty stratum of HBCUs.** This stratum includes all 65 HBCUs (including those that are doctorate-granting institutions or university-system campuses).

(3) **A certainty stratum of university-system campuses.** This stratum includes 56 "university-system campuses;" each sample entry is the aggregation of all campuses that make up a university system. Note that no HBCUs are included in this stratum even if they are university-system campuses.

(4) **A probability stratum of institutions that grant degrees at the master's level or below.** This stratum includes 62 master's or bachelor's degree-granting institutions and institutions that offer no S&E degrees at any degree level, out of a survey stratum universe of 243. Note that none of the universities or colleges included in this stratum is either an HBCU or a university-system campus. This stratum had a sampling ratio of 26 percent.

The data in this report are weighted to represent national-level R&D expenditures for universities and colleges (as mentioned previously under "National Total and Imputation"). The sample data, after imputation, were inflated to produce universe estimates by weighting the individual questionnaire data values by the inverse of the sampling ratio. Thus, in aggregating data for institutions from the probability stratum for tabulation purposes, each datum value was weighted by the inverse of the sampling ratio.

Estimates derived for institutions in the probability stratum were based on a sample, and the relative standard error (coefficient of variation) of an estimate was then obtained by dividing the standard error by the estimate itself, expressed as a percentage of the estimate.

The standard errors and coefficients of variation for each major S&E field are shown in table A-5. For example, for total academic R&D expenditures of $23 billion, the standard error of the estimate is $131.2 million at the 95-percent confidence level, with a coefficient of variation of ±0.6 percent. Similarly, for the estimate of $13.8 billion in federally financed expenditures, the 95-percent confidence limits are ± $60.6 million, with a coefficient of variation of ±0.4 percent.

Data Availability

Data published in this report are also available in machine-readable form on the World Wide Web. Single-year or multi-year data files are available with data for FYs 1975-96. Information on file formats and the years for which they are available can be found on the World Wide Web at URL *http://www.nsf.gov/sbe/srs/rdexp/95pubuse.htm*.

Selected data items for institutions are available on the World Wide Web *(http://www.nsf.gov/sbe/srs/profiles/start.htm)*. These profiles cover data from this survey as well as data collected in NSF's other academic S&E surveys: the Survey of Graduate Students and Postdoctorates in Science and Engineering (graduate student survey) and the Survey of Federal Science and Engineering Support to Universities, Colleges, and Nonprofit Institutions (Federal support survey). The profiles are also linked to the corresponding ranking table of each survey.

Institutional researchers can obtain data from several academic S&E resources through the Web Computer-Aided Science Policy Analysis and Research (WebCASPAR) database system, which is an easy-to-use tool for the retrieval and analysis of statistical data on academic S&E resources. WebCASPAR provides an extensive and growing data library with multi-year statistics on the state of higher education in general and on academic S&E resources specifically. This data library is based on a set of standard institutional and field-of-science definitions across the multiple sources used to develop the database. The WebCASPAR program includes built-in help capabilities to facilitate the use and interpretation of the data.

The latest version of WebCASPAR can now be accessed via the World Wide Web *(http://caspar.nsf.gov/webcaspar)*.

WebCASPAR data are drawn from a number of sources. All data are available for individual institutions, by state, and at the national level. Longitudinal data from surveys of universities and colleges conducted by the NSF's Division of Science Resources Studies include the academic R&D expenditures survey, the Federal support survey, and the graduate student survey. Data from the surveys of universities and colleges conducted by NCES include earned degrees, opening fall enrollment, faculty salaries, tenure and fringe benefits, and financial statistics.

Section A.

Tables

SECTION A. TABLES

Table *Page*

A-1a. Response rates for the academic research and development expenditures survey, by highest degree granted: fiscal year 1996 13

A-1b. Response rates for the academic research and development expenditures survey, by stratum and highest degree granted: fiscal year 1996 14

A-2. Imputed amounts for research and development expenditures at universities and colleges, by highest degree granted: fiscal year 1996 15

A-3a. Imputed amounts for research and development expenditures at universities and colleges, by science and engineering field: fiscal year 1996 16

A-3b. Imputed amounts for federally financed research and development expenditures at universities and colleges, by science and engineering field: fiscal year 1996 17

A-4. Imputed amounts for research and development expenditures at universities and colleges, by source of funds: fiscal year 1996 18

A-5. Standard errors of the estimates (SE) and coefficients of variation (CV) for research and development expenditures at universities and colleges, by science and engineering field: fiscal year 1996 19

Table A-1a. Response rates for the academic research and development expenditures survey, by highest degree granted: fiscal year 1996

Highest degree granted	Number in survey universe	Number in sample population	Number of complete responses	Number of partial responses	Total number of responses	Response rate
Grand total	692	511	356	141	497	97.3
Universities and colleges total	674	493	339	141	480	97.4
Doctorate	343	343	236	99	337	97.7
Master's	203	84	64	17	81	96.4
Bachelor's and below	128	66	39	25	64	97.0
Academically-administered FFRDCs total	18	18	17	0	17	94.4

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table A-1b. Response rates for the academic research and development expenditures survey, by stratum and highest degree granted: fiscal year 1996

Stratum	Number in survey universe	Number in sample population	Number of complete responses	Number of partial responses	Total number of responses	Response rate
Grand total	692	511	356	141	497	97.3
Doctoral stratum 1/	310	310	215	90	305	98.4
HBCU stratum	65	65	37	24	61	93.9
Doctorate	11	11	5	5	10	90.9
Master's	17	17	13	2	15	88.2
Bachelor's and below	37	37	19	17	36	97.3
University system stratum	56	56	43	11	54	96.4
Doctorate	22	22	16	4	20	90.9
Master's	29	29	24	5	29	100.0
Bachelor's and below	5	5	3	2	5	100.0
Master's or below stratum 2/	243	62	44	16	60	96.8
Master's	156	38	27	10	37	97.4
Bachelor's and below	87	24	17	6	23	95.8
Academically-administered FFRDCs	18	18	17	0	17	94.4

1/ Doctoral stratum does not include doctorate-granting institutions that are recorded in either the HBCU or the university system stratum.

2/ Master's or below stratum does not include master's-granting institutions or bachelor's and no S&E degree granting institutions that are recorded in either the HBCU stratum or the university system stratum.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table A-2. Imputed amounts for research and development expenditures at universities and colleges, by highest degree granted: fiscal year 1996

[Dollars in millions]

Highest degree granted	National estimate of separately budgeted R&D expenditures	Amount inflated due to weighting	Inflated imputed amount	Inflated imputed amount as percent of total
Total	22,995	247	91	0.4
Doctorate granting institutions	22,481	0	74	0.3
Non-doctorate granting institutions	515	247	17	3.3

NOTE: Because of rounding, figures may not add to the totals shown.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table A-3a. Imputed amounts for research and development expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in millions]

Science and engineering field	National estimate of separately budgeted R&D expenditures	Amount inflated due to weighting	Inflated imputed amount	Inflated imputed amount as percent of total
Total	22,995	247	91	0.4
Engineering	3,675	22	57	1.6
Physical sciences	2,260	37	60	2.7
Environmental sciences	1,478	45	72	4.9
Mathematical sciences	289	7	11	3.8
Computer sciences	702	13	9	1.3
Life sciences	12,697	91	198	1.6
Psychology	372	5	12	3.2
Social sciences	1,104	20	38	3.4
Other sciences	419	6	6	1.4

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table A-3b. Imputed amounts for federally financed research and development expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in millions]

Science and engineering field	National estimate of separately budgeted R&D expenditures	Amount inflated due to weighting	Inflated imputed amount	Inflated imputed amount as percent of total
Total	13,810	128	94	0.7
Engineering	2,216	14	33	1.5
Physical sciences	1,639	23	37	2.3
Environmental sciences	994	22	50	5.0
Mathematical sciences	209	6	9	4.3
Computer sciences	509	8	8	1.6
Life sciences	7,389	38	110	1.5
Psychology	254	4	9	3.5
Social sciences	427	10	14	3.3
Other sciences	172	2	3	1.7

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table A-4. Imputed amounts for research and development expenditures at universities and colleges, by source of funds: fiscal year 1996

[Dollars in millions]

Source of funds	National estimate of separately budgeted R&D expenditures	Amount inflated due to weighting	Inflated imputed amount	Inflated imputed amount as percent of total
Total	22,995	247	91	0.4
Federal Government	13,810	128	94	0.7
State and local government	1,725	16	7	0.4
Industry	1,576	15	14	0.9
Institutional funds	4,232	67	28	0.7
All other sources	1,653	21	16	1.0

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table A-5. Standard errors of the estimates (SE) and coefficients of variation (CV) for research and development expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[SE in thousands of dollars; CV in percent]

Science and engineering field	Separately budgeted R&D expenditures		Federally financed R&D expenditures	
	1.96 SE	1.96 CV	1.96 SE	1.96 CV
Total	131,232	0.6	60,553	0.4
Engineering	16,520	0.4	11,587	0.5
Physical sciences	16,122	0.7	11,183	0.7
Environmental sciences	34,640	2.3	18,456	1.9
Mathematical sciences	4,018	1.4	3,389	1.6
Computer sciences	10,651	1.5	6,884	1.4
Life sciences	83,722	0.7	23,673	0.3
Psychology	2,710	0.7	2,489	1.0
Social sciences	12,233	1.1	8,714	2.0
Other sciences	4,897	1.2	3,648	2.1

SOURCE: National Science Foundation SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Section B.

Detailed Statistical Tables

Note

To obtain accurate historical data, use only the latest detailed statistical tables for FY 1996 and not data published earlier. Institutions revise prior-years' data when important changes occur in reporting practices and program classifications, and only the latest tables incorporate such changes.

Table *Page*

UNIVERSITIES AND COLLEGES

R&D Expenditures

B-1. R&D expenditures at universities and colleges, by source of funds: fiscal years 1953–96 29
B-2. R&D expenditures at universities and colleges, by character of work: fiscal years 1953–96 30
B-2A. Federally financed R&D expenditures at universities and colleges, by character of work: fiscal years 1953–96 31

R&D Expenditures, by Source of Funds and Science & Engineering Field

B-3. R&D expenditures at universities and colleges, by source of funds and science and engineering field: fiscal years 1989–96 32
B-4. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal years 1989–96 33
B-5. Non-federal R&D expenditures at universities and colleges, by source of funds and science and engineering field: fiscal years 1989–96 34
B-6. R&D expenditures at doctorate-granting institutions, by source of funds and science and engineering field: fiscal years 1989–96 35
B-7. Federally financed R&D expenditures at doctorate-granting institutions, by science and engineering field: fiscal years 1989–96 36
B-8. Non-Federal R&D expenditures at doctorate-granting institutions, by source of funds and science and engineering field: fiscal years 1989–96 37
B-9. R&D expenditures at public universities and colleges, by source of funds and science and engineering field: fiscal years 1989–96 38
B-10. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal years 1989–96 39
B-11. Non-Federal R&D expenditures at public universities and colleges, by source of funds and science and engineering field: fiscal years 1989–96 40
B-12. R&D expenditures at private universities and colleges, by source of funds and science and engineering field: fiscal years 1989–96 41
B-13. Federally financed R&D expenditures at private universities and colleges, by science and engineering field: fiscal years 1989–96 42
B-14. Non-Federal R&D expenditures at private universities and colleges, by source of funds and science and engineering field: fiscal years 1989–96 43
B-15. R&D expenditures at doctorate-granting institutions, by source of funds, science and engineering field, and control: fiscal years 1989, 1995, and 1996 44
B-16. Federally financed R&D expenditures at doctorate-granting institutions, by science and engineering field and control: fiscal years 1989, 1995, and 1996 45
B-17. Non-Federal R&D expenditures at doctorate-granting institutions, by source of funds, science and engineering field, and control: fiscal years 1989, 1995, and 1996 46

Table *Page*

R&D Expenditures at Historically Black Colleges and Universities, by Source of Funds and Science & Engineering Field

B-18. R&D expenditures at historically black colleges and universities, by source of funds and science and engineering field: fiscal years 1989–96 47
B-19. Federally financed R&D expenditures at historically black colleges and universities, by science and engineering field: fiscal years 1989–96 48
B-20. Non-Federal R&D expenditures at historically black colleges and universities, by source of funds and science and engineering field: fiscal years 1989–96 49

Geographic Distribution of R&D Expenditures

B-21. R&D expenditures at universities and colleges, by geographic division and source: fiscal year 1996 50
B-22. R&D expenditures at doctorate-granting institutions, by geographic division, State, and source of funds: fiscal year 1996 51
B-23. R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989–96 52
B-24. Federally financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989–96 53
B-25. State and local government-financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989–96 54
B-26. Industry-financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989–96 55
B-27. Institutionally financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989–96 56
B-28. All other sources of financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989–96 57
B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996 58
B-30. R&D expenditures at doctorate-granting institutions, by geographic division, State, and science and engineering field: fiscal year 1996 68
B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996 69

R&D Expenditures, in Descending Order of Amounts, by Institution

B-32. Total R&D expenditures at universities and colleges: fiscal years 1989–96 79
B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989–96 89
B-34. Non-Federal R&D expenditures at universities and colleges: fiscal years 1989–96 99

Table *Page*

B-35. R&D expenditures at universities and colleges, by source of funds: fiscal year 1996 103
B-36. R&D expenditures at public universities and colleges, by source of funds: fiscal year 1996 107
B-37. R&D expenditures at private universities and colleges, by source of funds: fiscal year 1996 110
B-38. Industry-sponsored R&D expenditures at universities and colleges: fiscal years 1989–96 112
B-39. R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996 116
B-40. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996 120
B-41. Non-Federal R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996 124
B-42. R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996 128
B-43. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996 131
B-44. R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1996 133
B-45. Federally financed R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1996 135
B-46. Total and federally financed R&D expenditures at historically black colleges and universities: fiscal years 1993–96 137

R&D Expenditures, by Science & Engineering Field and Selected Subfields, in Descending Order of Amounts, by Institution

B-47. Total and federally financed R&D expenditures in engineering at universities and colleges: fiscal years 1993–96 139
B-48. R&D expenditures in engineering subfields at universities and colleges: fiscal year 1996 141
B-49. Federally financed R&D expenditures in engineering subfields at universities and colleges: fiscal year 1996 143
B-50. R&D expenditures in the physical sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 145
B-51. Federally financed R&D expenditures in the physical sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 147
B-52. Total and federally financed R&D expenditures in chemistry at universities and colleges: fiscal years 1993–96 149
B-53. Total and federally financed R&D expenditures in physics at universities and colleges: fiscal years 1993–96 151
B-54. R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 153
B-55. Federally financed R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 155

Table *Page*

B-56. Total and federally financed R&D expenditures in the mathematical sciences at universities and colleges: fiscal years 1993–96 157
B-57. Total and federally financed R&D expenditures in the computer sciences at universities and colleges: fiscal years 1993–96 159
B-58. R&D expenditures in the life sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 161
B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 164
B-60. Total and federally financed R&D expenditures in the agricultural sciences at universities and colleges: fiscal years 1993–96 167
B-61. Total and federally financed R&D expenditures in the biological sciences at universities and colleges: fiscal years 1993–96 169
B-62. Total and federally financed R&D expenditures in the medical sciences at universities and colleges: fiscal years 1993–96 171
B-63. Total and federally financed R&D expenditures in psychology at universities and colleges: fiscal years 1993–96 173
B-64. R&D expenditures in the social sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 175
B-65. Federally financed R&D expenditures in the social sciences at universities and colleges: fiscal years 1993–96 and by subfield for 1996 177

Current Fund Expenditures for Research Equipment, by Science & Engineering Field and Source of Funds

B-66. Current fund expenditures for research equipment at universities and colleges, by science and engineering field and source of funds: fiscal years 1989, 1995, and 1996 179
B-67. Current fund expenditures for research equipment at doctorate-granting institutions, by science and engineering field and source of funds: fiscal years 1989, 1995, and 1996 180
B-68. Current fund expenditures for research equipment at universities and colleges, by science and engineering field, source of funds, and type of control: fiscal year 1996 181
B-69. Total and federally financed current fund expenditures for research equipment at universities and colleges: fiscal years 1993–96 182

University-Administered Federally Funded Research and Development Centers

R&D Expenditures at University-Administered Federally Funded Research and Development Centers

B-70. R&D expenditures at university-administered federally funded research and development centers, by character of work: fiscal years 1953–96 184

Table *Page*

B-71. R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal years 1989–96 185
B-72. Federally financed R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal years 1989–96 186
B-73. R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal year 1996 187
B-74. Total and federally financed R&D expenditures at university-administered federally funded research and development centers: fiscal years 1993–96 188

Table B-1. R&D expenditures at universities and colleges, by source of funds: fiscal years 1953-96

[Dollars in millions]

Fiscal year	Total	Source of funds				
		Federal Government	State and local governments	Industry	Institutional funds	All other sources
1953	255	138	37	19	35	26
1954	290	160	42	22	38	28
1955	312	169	47	25	41	30
1956	372	213	53	29	43	34
1957	410	229	60	34	49	38
1958	456	254	68	39	53	42
1959	526	306	76	39	58	47
1960	646	405	85	40	64	52
1961	763	500	95	40	70	58
1962	904	613	106	40	79	66
1963	1,081	760	118	41	89	72
1964	1,275	917	132	40	103	83
1965	1,474	1,073	143	41	124	93
1966	1,715	1,261	156	42	148	108
1967	1,921	1,409	164	48	181	119
1968	2,149	1,572	172	55	218	132
1969	2,225	1,600	197	60	223	145
1970	2,335	1,647	219	61	243	165
1971	2,500	1,724	255	70	274	177
1972	2,630	1,795	269	74	305	187
1973	2,884	1,985	295	84	318	202
1974	3,022	2,032	308	95	368	219
1975	3,409	2,288	332	113	417	259
1976	3,729	2,512	364	123	446	285
1977	4,067	2,726	374	139	514	314
1978[1]	4,625	3,059	414	170	623	359
1979	5,366	3,598	472	193	735	368
1980	6,063	4,098	491	236	835	403
1981	6,847	4,571	546	291	1,004	435
1982	7,324	4,768	616	337	1,111	491
1983	7,882	4,989	626	389	1,302	576
1984	8,620	5,431	690	475	1,411	613
1985	9,687	6,064	752	560	1,617	694
1986	10,928	6,712	915	700	1,869	732
1987	12,153	7,343	1,023	790	2,168	828
1988	13,463	8,193	1,106	872	2,356	935
1989	14,976	8,990	1,223	995	2,697	1,071
1990	16,285	9,637	1,324	1,128	3,006	1,191
1991	17,584	10,233	1,473	1,205	3,366	1,307
1992	18,816	11,091	1,490	1,280	3,547	1,409
1993	19,948	11,954	1,558	1,361	3,589	1,486
1994	21,051	12,668	1,541	1,414	3,848	1,579
1995	22,207	13,356	1,681	1,483	4,072	1,617
1996	22,995	13,810	1,725	1,576	4,232	1,653

[1] Fiscal year 1978 data are estimated based on data collected from doctorate-granting institutions only.

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-2. R&D expenditures at universities and colleges, by character of work: fiscal years 1953-96

[Dollars in millions]

Fiscal year	Total	Character of work			
		Basic research		Applied research and development	
		Amount	Percent of total	Amount	Percent of total
1953	255	110	43.1	145	56.9
1954	290	136	46.9	154	53.1
1955	312	159	51.0	153	49.0
1956	372	200	53.8	172	46.2
1957	410	240	58.5	170	41.5
1958	456	281	61.6	175	38.4
1959	526	343	65.2	183	34.8
1960	646	433	67.0	213	33.0
1961	763	536	70.2	227	29.8
1962	904	659	72.9	245	27.1
1963	1,081	814	75.3	267	24.7
1964	1,275	1,003	78.7	272	21.3
1965	1,474	1,138	77.2	336	22.8
1966	1,715	1,303	76.0	412	24.0
1967	1,921	1,457	75.8	464	24.2
1968	2,149	1,650	76.8	499	23.2
1969	2,225	1,711	76.9	514	23.1
1970	2,335	1,796	76.9	539	23.1
1971	2,500	1,914	76.6	586	23.4
1972	2,630	2,022	76.9	608	23.1
1973	2,884	2,053	71.2	831	28.8
1974	3,022	2,153	71.2	869	28.8
1975	3,409	2,410	70.7	999	29.3
1976	3,729	2,549	68.4	1,180	31.6
1977	4,067	2,800	68.8	1,267	31.2
1978[1]	4,625	..	..	..	..
1979	5,366	3,619	67.4	1,747	32.6
1980	6,063	4,036	66.6	2,026	33.4
1981	6,847	4,594	67.1	2,253	32.9
1982	7,324	4,879	66.6	2,445	33.4
1983	7,882	5,303	67.3	2,579	32.7
1984	8,620	5,733	66.5	2,887	33.5
1985	9,687	6,556	67.7	3,131	32.3
1986	10,928	7,493	68.6	3,435	31.4
1987	12,153	8,393	69.1	3,760	30.9
1988	13,463	8,894	66.1	4,569	33.9
1989	14,976	9,791	65.4	5,186	34.6
1990	16,285	10,641	65.3	5,644	34.7
1991	17,584	11,604	66.0	5,980	34.0
1992	18,816	12,513	66.5	6,303	33.5
1993	19,948	13,300	66.7	6,648	33.3
1994	21,051	14,058	66.8	6,993	33.2
1995	22,207	14,890	67.1	7,317	32.9
1996	22,995	15,467	67.3	7,529	32.7

[1] Separate data for basic research and applied research and development were not collected for fiscal year 1978.

NOTES: R&D expenditures by character of work are based on estimates of basic research provided by universities and colleges.

Because of rounding, detail may not add to totals.

KEY: .. = not available

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-2A. Federally financed R&D expenditures at universities and colleges, by character of work: fiscal years 1953-96

[Dollars in millions]

Fiscal year	Total	Character of work			
		Basic research		Applied research and development	
		Amount	Percent of total	Amount	Percent of total
1953	138	0	0.0	0	0.0
1954	160	0	0	0	0
1955	169	0	0	0	0
1956	213	0	0	0	0
1957	229	0	0	0	0
1958	254	0	0	0	0
1959	306	0	0	0	0
1960	405	0	0	0	0
1961	500	0	0	0	0
1962	613	0	0	0	0
1963	760	0	0	0	0
1964	917	0	0	0	0
1965	1,073	0	0	0	0
1966	1,261	0	0	0	0
1967	1,409	0	0	0	0
1968	1,572	0	0	0	0
1969	1,600	0	0	0	0
1970	1,647	0	0	0	0
1971	1,724	0	0	0	0
1972	1,795	1,420	79.1	375	20.9
1973	1,985	1,454	73.2	531	26.8
1974	2,032	1,523	75.0	509	25.0
1975	2,288	1,695	74.1	593	25.9
1976	2,512	1,841	73.3	671	26.7
1977	2,726	2,007	73.6	719	26.4
1978[1]	3,059	--	--	--	--
1979	3,598	2,577	71.6	1,022	28.4
1980	4,098	2,861	69.8	1,237	30.2
1981	4,571	3,260	71.3	1,311	28.7
1982	4,768	3,402	71.4	1,367	28.7
1983	4,989	3,547	71.1	1,442	28.9
1984	5,431	3,830	70.5	1,601	29.5
1985	6,064	4,343	71.6	1,722	28.4
1986	6,712	4,867	72.5	1,844	27.5
1987	7,343	5,375	73.2	1,968	26.8
1988	8,193	5,678	69.3	2,514	30.7
1989	8,990	6,194	68.9	2,796	31.1
1990	9,637	6,647	69.0	2,989	31.0
1991	10,233	7,126	69.6	3,107	30.4
1992	11,091	7,716	69.6	3,374	30.4
1993	11,954	8,396	70.2	3,558	29.8
1994	12,668	8,925	70.5	3,744	29.6
1995	13,356	9,452	70.8	3,903	29.2
1996	13,810	9,859	71.4	3,951	28.6

[1] Separate data for basic research and applied research and development were not collected for fiscal year 1978.

NOTES: R&D expenditures by character of work are based on estimates of basic research provided by universities and colleges.

Because of rounding, detail may not add to totals.

KEY: -- = not available

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Table B-3. R&D expenditures at universities and colleges, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	22,995,463	22,207,253	21,050,664	19,948,348	18,816,086	17,584,017	16,285,322	14,976,204
	Source of funds							
Federal Government	13,810,064	13,355,537	12,668,286	11,954,091	11,090,616	10,232,823	9,636,732	8,989,780
State and local governments	1,725,079	1,680,546	1,541,177	1,558,256	1,490,093	1,473,332	1,323,744	1,223,225
Industry	1,575,673	1,482,863	1,413,716	1,361,024	1,279,681	1,204,677	1,127,736	994,881
Institutional funds	4,232,111	4,071,692	3,848,355	3,588,710	3,547,072	3,366,489	3,005,723	2,697,446
All other sources	1,652,535	1,616,616	1,579,130	1,486,267	1,408,624	1,306,696	1,191,387	1,070,872
	Field							
Engineering, total	3,674,806	3,500,455	3,340,864	3,155,878	3,062,620	2,906,894	2,656,580	2,392,378
Aeronautical and astronautical	229,723	237,834	214,087	212,601	196,584	180,207	163,613	148,431
Chemical	311,240	296,525	278,232	273,632	260,940	244,003	218,179	193,674
Civil	449,976	425,329	399,106	371,290	339,432	314,989	284,272	245,155
Electrical	875,756	817,251	742,510	698,129	703,657	679,092	662,892	594,953
Mechanical	519,999	518,476	498,459	482,868	450,570	420,849	390,604	342,988
Metallurgical and materials [1]	360,106	328,525	308,999	298,923	293,946	303,621	273,524	--
Other, n.e.c.	928,006	876,514	899,472	818,435	817,491	764,133	663,496	867,177
All sciences, total	19,320,657	18,706,798	17,709,799	16,792,470	15,753,466	14,677,123	13,628,742	12,583,826
Physical sciences	2,260,281	2,251,011	2,171,987	2,130,300	2,055,082	1,938,643	1,806,977	1,647,046
Astronomy	279,098	306,781	268,781	258,520	238,052	211,135	170,429	137,316
Chemistry	800,985	771,850	759,245	740,221	704,502	670,685	647,738	606,438
Physics	990,096	981,402	950,678	940,490	921,176	881,286	841,808	785,845
Other, n.e.c.	190,103	190,979	193,283	191,069	191,352	175,537	147,002	117,447
Environmental sciences	1,477,873	1,444,456	1,407,449	1,316,946	1,240,207	1,117,391	1,067,891	1,003,368
Atmospheric	225,404	210,862	207,080	210,405	194,176	174,554	173,286	165,252
Earth sciences	452,797	463,596	464,508	416,344	412,825	384,243	354,482	323,801
Oceanography	517,826	477,399	455,298	458,573	427,970	389,853	377,394	358,670
Other, n.e.c.	281,846	292,598	280,563	231,624	205,236	168,741	162,729	155,645
Mathematical sciences	288,988	280,359	282,259	272,155	247,644	230,095	221,688	214,592
Computer sciences	702,189	687,199	648,076	607,679	555,367	554,369	514,657	472,613
Life sciences	12,696,650	12,226,760	11,497,259	10,851,066	10,196,197	9,471,985	8,725,783	8,060,887
Agricultural sciences	1,890,195	1,818,420	1,665,803	1,558,791	1,512,300	1,458,432	1,349,302	1,282,033
Biological sciences	3,970,981	3,866,146	3,735,014	3,535,554	3,303,385	3,063,586	2,858,798	2,639,698
Medical sciences	6,354,922	6,072,206	5,639,057	5,323,726	4,963,708	4,546,403	4,154,311	3,818,517
Other, n.e.c.	480,552	469,987	457,384	432,995	416,804	403,564	363,372	320,639
Psychology	372,305	367,777	357,275	349,698	328,493	283,142	252,824	233,611
Social sciences	1,103,711	1,019,499	953,908	896,337	815,339	749,941	703,070	633,269
Economics	270,687	249,780	243,010	231,244	221,551	208,809	200,588	186,868
Political science	185,397	174,611	162,636	151,084	142,095	125,056	115,327	103,353
Sociology	234,583	214,251	195,913	183,325	163,263	155,623	131,843	119,086
Other, n.e.c.	413,044	380,857	352,349	330,684	288,430	260,453	255,312	223,962
Other sciences, n.e.c.	418,660	429,737	391,588	368,289	315,137	331,557	335,852	318,440

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-4. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	13,810,064	13,355,537	12,668,286	11,954,091	11,090,616	10,232,823	9,636,732	8,989,780
Engineering, total	2,216,355	2,098,150	1,990,314	1,857,930	1,752,600	1,638,115	1,525,924	1,383,757
Aeronautical and astronautical	167,923	180,601	162,016	159,839	150,859	137,638	127,116	114,988
Chemical	171,130	161,033	150,448	142,815	126,225	118,006	110,362	100,907
Civil	196,488	183,652	163,625	154,345	143,643	123,646	117,007	102,168
Electrical	592,202	545,015	490,055	458,418	449,459	435,877	431,820	386,630
Mechanical	339,666	339,437	326,470	309,993	268,857	251,318	238,203	214,128
Metallurgical and materials[1]	190,150	174,757	155,012	150,438	143,259	153,099	139,133	--
Other, n.e.c.	558,796	513,655	542,686	482,082	470,298	418,531	362,283	464,936
All sciences, total	11,593,709	11,257,387	10,677,972	10,096,161	9,338,016	8,594,708	8,110,808	7,606,023
Physical sciences	1,639,390	1,639,422	1,563,807	1,512,633	1,475,544	1,383,290	1,315,247	1,197,691
Astronomy	185,198	208,607	181,658	165,031	158,350	136,018	112,714	87,941
Chemistry	560,258	536,247	520,028	505,172	479,611	451,107	444,914	421,966
Physics	759,915	759,286	725,341	708,166	708,029	679,626	652,123	606,140
Other, n.e.c.	134,019	135,281	136,780	134,264	129,554	116,539	105,496	81,644
Environmental sciences	993,769	966,290	948,940	869,006	790,619	700,135	680,790	650,362
Atmospheric	177,803	166,464	164,642	160,634	140,073	129,384	131,110	128,806
Earth sciences	268,512	273,753	273,559	243,266	238,191	217,972	204,515	186,787
Oceanography	362,670	334,779	323,608	329,490	306,479	263,534	262,098	259,920
Other, n.e.c.	184,784	191,294	187,131	135,616	105,876	89,245	83,067	74,849
Mathematical sciences	209,363	205,454	205,698	203,039	183,194	170,485	160,868	157,289
Computer sciences	508,661	484,776	462,942	423,319	379,798	371,549	342,321	323,833
Life sciences	7,388,936	7,133,767	6,753,210	6,386,297	5,910,698	5,418,303	5,083,298	4,783,801
Agricultural sciences	558,494	536,475	498,211	449,963	417,741	377,281	352,804	349,450
Biological sciences	2,565,775	2,501,500	2,448,204	2,310,172	2,136,964	1,950,042	1,844,252	1,736,178
Medical sciences	3,996,029	3,829,094	3,537,351	3,369,501	3,113,366	2,848,670	2,671,393	2,502,586
Other, n.e.c.	268,637	266,699	269,445	256,661	242,627	242,310	214,849	195,587
Psychology	254,039	249,407	241,573	234,385	214,902	186,282	163,806	153,081
Social sciences	427,181	389,223	359,317	338,359	281,298	252,717	226,277	212,254
Economics	91,043	79,753	75,991	77,301	65,945	59,669	54,346	54,316
Political science	62,735	59,917	50,270	42,827	35,045	28,541	25,364	25,884
Sociology	121,943	104,431	96,703	91,078	81,710	72,023	59,989	53,883
Other, n.e.c.	151,459	145,124	136,354	127,153	98,598	92,484	86,578	78,171
Other sciences, n.e.c.	172,372	189,046	142,484	129,123	101,963	111,947	138,201	127,712

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-5. Non-Federal R&D expenditures at universities and colleges, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	9,185,399	8,851,717	8,382,378	7,994,257	7,725,470	7,351,194	6,648,590	5,986,424
	Source of funds							
State and local governments	1,725,079	1,680,546	1,541,177	1,558,256	1,490,093	1,473,332	1,323,744	1,223,225
Industry	1,575,673	1,482,863	1,413,716	1,361,024	1,279,681	1,204,677	1,127,736	994,881
Institutional funds	4,232,111	4,071,692	3,848,355	3,588,710	3,547,072	3,366,489	3,005,723	2,697,446
All other sources	1,652,535	1,616,616	1,579,130	1,486,267	1,408,624	1,306,696	1,191,387	1,070,872
	Field							
Engineering, total	1,458,451	1,402,305	1,350,551	1,297,948	1,310,020	1,268,779	1,130,656	1,008,621
Aeronautical and astronautical	61,800	57,233	52,070	52,762	45,725	42,569	36,497	33,443
Chemical	140,110	135,492	127,784	130,817	134,715	125,997	107,817	92,767
Civil	253,488	241,677	235,481	216,945	195,789	191,343	167,265	142,987
Electrical	283,554	272,237	252,455	239,711	254,198	243,215	231,072	208,323
Mechanical	180,333	179,039	171,988	172,875	181,713	169,531	152,401	128,860
Metallurgical and materials[1]	169,956	153,769	153,987	148,485	150,687	150,522	134,391	--
Other, n.e.c.	369,210	362,858	356,786	336,353	347,193	345,602	301,213	402,241
All sciences, total	7,726,948	7,449,412	7,031,827	6,696,309	6,415,450	6,082,415	5,517,934	4,977,803
Physical sciences	620,891	611,589	608,180	617,667	579,538	555,353	491,730	449,355
Astronomy	93,900	98,173	87,124	93,489	79,702	75,117	57,715	49,375
Chemistry	240,727	235,602	239,217	235,049	224,891	219,578	202,824	184,472
Physics	230,180	222,116	225,337	232,324	213,147	201,660	189,685	179,705
Other, n.e.c.	56,083	55,698	56,502	56,805	61,798	58,998	41,506	35,803
Environmental sciences	484,104	478,165	458,508	447,940	449,588	417,256	387,101	353,006
Atmospheric	47,601	44,399	42,438	49,771	54,103	45,170	42,176	36,446
Earth sciences	184,286	189,843	190,949	173,078	174,634	166,271	149,967	137,014
Oceanography	155,156	142,621	131,690	129,083	121,491	126,319	115,296	98,750
Other, n.e.c.	97,062	101,303	93,431	96,008	99,360	79,496	79,662	80,796
Mathematical sciences	79,625	74,905	76,561	69,116	64,450	59,610	60,820	57,303
Computer sciences	193,528	202,423	185,134	184,360	175,569	182,820	172,336	148,780
Life sciences	5,307,715	5,092,992	4,744,048	4,464,769	4,285,499	4,053,682	3,[illegible]2,485	3,277,086
Agricultural sciences	1,331,702	1,281,945	1,167,592	1,108,828	1,094,559	1,081,151	996,498	932,583
Biological sciences	1,405,206	1,364,646	1,286,811	1,225,382	1,166,421	1,113,544	1,014,546	903,520
Medical sciences	2,358,893	2,243,112	2,101,707	1,954,225	1,850,342	1,697,733	1,482,918	1,315,931
Other, n.e.c.	211,915	203,289	187,939	176,334	174,177	161,254	148,523	125,052
Psychology	118,267	118,370	115,702	115,313	113,591	96,860	89,018	80,530
Social sciences	676,530	630,276	594,591	557,978	534,041	497,224	476,793	421,015
Economics	179,644	170,028	167,019	153,943	155,606	149,140	146,242	132,552
Political science	122,662	114,695	112,366	108,257	107,050	96,515	89,963	77,469
Sociology	112,639	109,820	99,210	92,247	81,553	83,600	71,854	65,203
Other, n.e.c.	261,585	235,733	215,995	203,531	189,832	167,969	168,734	145,791
Other sciences, n.e.c.	246,288	240,691	249,103	239,166	213,174	219,610	197,651	190,728

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-6. R&D expenditures at doctorate-granting institutions, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	22,480,793	21,730,592	20,613,177	19,576,780	18,525,609	17,333,916	16,057,379	14,770,253
	Source of funds							
Federal Government	13,502,516	13,067,900	12,397,547	11,724,168	10,908,803	10,075,262	9,491,923	8,859,110
State and local governments	1,688,524	1,638,410	1,508,643	1,522,643	1,461,895	1,449,515	1,299,660	1,202,659
Industry	1,548,331	1,454,608	1,390,941	1,330,912	1,255,054	1,185,459	1,110,516	978,663
Institutional funds	4,124,310	3,980,006	3,765,808	3,534,965	3,509,593	3,333,423	2,977,522	2,672,272
All other sources	1,617,112	1,589,668	1,550,238	1,464,092	1,390,264	1,290,257	1,177,758	1,057,549
	Field							
Engineering, total	3,611,532	3,440,798	3,287,496	3,094,337	3,013,783	2,870,311	2,623,578	2,364,695
Aeronautical and astronautical	226,970	235,059	210,765	206,778	192,650	176,689	160,794	145,743
Chemical	308,601	294,527	276,705	271,574	259,143	242,441	216,568	191,837
Civil	440,359	415,635	389,359	360,247	332,518	308,561	279,532	241,245
Electrical	857,368	801,947	729,644	684,804	693,439	672,067	656,955	589,072
Mechanical	504,678	504,618	490,203	469,796	438,184	412,317	383,740	337,588
Metallurgical and materials [1]	359,630	328,244	308,519	297,535	292,721	302,912	272,943	..
Other, n.e.c.	913,926	860,768	882,301	803,603	805,128	755,324	653,046	859,210
All sciences, total	18,869,261	18,289,794	17,325,681	16,482,443	15,511,826	14,463,605	13,433,801	12,405,558
Physical sciences	2,177,657	2,179,076	2,104,094	2,062,893	1,999,615	1,889,828	1,763,296	1,608,371
Astronomy	275,913	301,693	265,887	257,295	236,964	210,131	169,539	136,552
Chemistry	752,319	731,959	720,823	703,446	673,026	642,211	623,377	584,478
Physics	961,913	956,210	926,317	913,482	899,456	863,327	824,685	771,429
Other, n.e.c.	187,512	189,214	191,067	188,670	190,169	174,159	145,695	115,912
Environmental sciences	1,407,482	1,381,487	1,345,924	1,274,215	1,213,215	1,094,891	1,046,177	984,494
Atmospheric	220,144	204,756	199,563	206,215	191,081	170,864	169,690	161,820
Earth sciences	426,883	441,532	440,403	402,623	403,516	376,861	347,658	318,438
Oceanography	490,453	450,424	433,051	441,229	419,989	383,392	371,474	353,181
Other, n.e.c.	270,002	284,775	272,907	224,148	198,629	163,774	157,355	151,055
Mathematical sciences	273,601	265,007	269,943	258,148	238,394	222,241	216,090	209,535
Computer sciences	678,483	668,660	633,512	596,083	543,737	544,672	506,233	465,244
Life sciences	12,501,127	12,047,076	11,328,029	10,735,251	10,100,163	9,385,356	8,640,543	7,979,581
Agricultural sciences	1,827,867	1,758,239	1,610,141	1,515,024	1,472,616	1,421,786	1,316,343	1,250,324
Biological sciences	3,854,426	3,761,214	3,634,752	3,477,046	3,256,486	3,022,477	2,813,973	2,597,790
Medical sciences	6,343,166	6,063,739	5,631,712	5,315,996	4,958,402	4,541,298	4,150,372	3,813,724
Other, n.e.c.	475,668	463,884	451,424	427,185	412,659	399,795	359,855	317,743
Psychology	359,469	349,817	340,930	331,901	315,716	272,039	242,594	224,996
Social sciences	1,066,161	987,697	926,408	869,538	793,285	729,674	688,374	619,145
Economics	266,135	244,259	237,506	225,769	216,055	203,798	198,004	184,602
Political science	180,119	169,743	157,627	148,395	140,698	123,867	114,127	102,123
Sociology	220,984	206,538	188,803	176,418	157,360	149,521	127,207	115,099
Other, n.e.c.	398,923	367,157	342,472	318,956	279,172	252,488	249,036	217,321
Other sciences, n.e.c.	405,281	410,974	376,841	354,414	307,701	324,904	330,494	314,192

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-7. Federally financed R&D expenditures at doctorate-granting institutions, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	13,502,516	13,067,900	12,397,547	11,724,168	10,908,803	10,075,262	9,491,923	8,859,110
Engineering, total	2,170,862	2,057,175	1,954,475	1,823,435	1,727,404	1,617,723	1,506,678	1,367,917
Aeronautical and astronautical	166,103	178,050	159,216	154,382	147,119	134,309	124,401	112,509
Chemical	169,184	159,568	149,345	141,679	125,279	117,181	109,472	99,573
Civil	191,906	179,858	158,603	149,978	141,089	121,179	114,962	100,514
Electrical	576,463	531,155	479,217	449,650	443,089	431,831	428,209	383,343
Mechanical	327,961	329,450	320,636	302,382	261,573	245,684	233,678	210,887
Metallurgical and materials[1]	189,785	174,545	154,652	149,589	142,530	152,626	138,735	--
Other, n.e.c.	549,460	504,549	532,806	475,775	466,725	414,913	357,221	461,091
All sciences, total	11,331,654	11,010,725	10,443,072	9,900,733	9,181,399	8,457,539	7,985,245	7,491,193
Physical sciences	1,582,148	1,586,873	1,515,912	1,467,963	1,436,869	1,349,400	1,285,506	1,170,856
Astronomy	183,793	205,637	180,079	164,222	157,650	135,366	112,121	87,420
Chemistry	524,900	506,441	492,592	480,154	456,797	431,023	428,130	406,909
Physics	740,859	740,573	707,722	690,556	693,659	667,293	640,447	595,743
Other, n.e.c.	132,596	134,222	135,519	133,031	128,763	115,718	104,808	80,784
Environmental sciences	959,243	933,817	915,889	844,874	776,586	687,540	668,613	638,512
Atmospheric	172,955	161,061	158,652	157,249	137,641	126,544	128,261	125,792
Earth sciences	258,197	265,998	263,544	236,750	234,037	214,550	201,274	184,187
Oceanography	347,084	319,018	310,635	319,684	302,633	260,092	258,507	256,446
Other, n.e.c.	181,007	187,740	183,058	131,191	102,275	86,354	80,571	72,087
Mathematical sciences	198,475	195,835	196,758	194,350	177,500	165,592	157,254	153,963
Computer sciences	493,732	475,208	453,504	415,866	371,893	364,882	336,829	319,175
Life sciences	7,280,017	7,027,028	6,648,714	6,307,733	5,843,271	5,359,761	5,025,275	4,729,297
Agricultural sciences	518,286	494,046	456,905	419,617	388,158	351,071	329,008	326,052
Biological sciences	2,507,017	2,445,177	2,394,149	2,271,463	2,104,922	1,923,149	1,815,201	1,710,221
Medical sciences	3,989,135	3,824,638	3,532,725	3,364,586	3,109,857	2,845,620	2,668,744	2,499,081
Other, n.e.c.	265,579	263,167	264,935	252,067	240,334	239,921	212,322	193,943
Psychology	244,228	234,452	227,915	220,642	205,136	177,565	156,130	146,841
Social sciences	407,450	373,855	345,823	326,735	271,836	243,615	219,699	206,897
Economics	88,249	76,496	72,916	73,687	62,494	56,689	53,092	53,423
Political science	61,381	59,103	49,252	42,322	34,520	28,021	24,913	25,362
Sociology	113,613	100,108	92,698	87,581	78,391	68,602	57,388	52,059
Other, n.e.c.	144,207	138,148	130,957	123,145	96,431	90,303	84,306	76,053
Other sciences, n.e.c.	166,361	183,657	138,557	122,570	98,308	109,184	135,939	125,652

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-8. Non-Federal R&D expenditures at doctorate-granting institutions, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	8,978,277	8,662,692	8,215,630	7,852,612	7,616,806	7,258,654	6,565,456	5,911,143
	Source of funds							
State and local governments	1,688,524	1,638,410	1,508,643	1,522,643	1,461,895	1,449,515	1,299,660	1,202,659
Industry	1,548,331	1,454,608	1,390,941	1,330,912	1,255,054	1,185,459	1,110,516	978,663
Institutional funds	4,124,310	3,980,006	3,765,808	3,534,965	3,509,593	3,333,423	2,977,522	2,672,272
All other sources	1,617,112	1,589,668	1,550,238	1,464,092	1,390,264	1,290,257	1,177,758	1,057,549
	Field							
Engineering, total	1,440,670	1,383,623	1,333,021	1,270,902	1,286,379	1,252,588	1,116,900	996,778
Aeronautical and astronautical	60,867	57,009	51,549	52,396	45,531	42,380	36,393	33,234
Chemical	139,417	134,959	127,360	129,895	133,864	125,260	107,096	92,264
Civil	248,453	235,777	230,756	210,269	191,429	187,382	164,570	140,731
Electrical	280,905	270,792	250,427	235,154	250,350	240,236	228,746	205,729
Mechanical	176,717	175,168	169,567	167,414	176,611	166,633	150,062	126,701
Metallurgical and materials[1]	169,845	153,699	153,867	147,946	150,191	150,286	134,208	..
Other, n.e.c.	364,466	356,219	349,495	327,828	338,403	340,411	295,825	398,119
All sciences, total	7,537,607	7,279,069	6,882,609	6,581,710	6,330,427	6,006,066	5,448,556	4,914,365
Physical sciences	595,509	592,203	588,182	594,930	562,746	540,428	477,790	437,515
Astronomy	92,120	96,056	85,808	93,073	79,314	74,765	57,418	49,132
Chemistry	227,419	225,518	228,231	223,292	216,229	211,188	195,247	177,569
Physics	221,054	215,637	218,595	222,926	205,797	196,034	184,238	175,686
Other, n.e.c.	54,916	54,992	55,548	55,639	61,406	58,441	40,887	35,128
Environmental sciences	448,239	447,670	430,035	429,341	436,629	407,351	377,564	345,982
Atmospheric	47,189	43,695	40,911	48,966	53,440	44,320	41,429	36,028
Earth sciences	168,686	175,534	176,859	165,873	169,479	162,311	146,384	134,251
Oceanography	143,369	131,406	122,416	121,545	117,356	123,300	112,967	96,735
Other, n.e.c.	88,995	97,035	89,849	92,957	96,354	77,420	76,784	78,968
Mathematical sciences	75,126	69,172	73,185	63,798	60,894	56,649	58,836	55,572
Computer sciences	184,751	193,452	180,008	180,217	171,844	179,790	169,404	146,069
Life sciences	5,221,110	5,020,048	4,679,315	4,427,518	4,256,892	4,025,595	3,615,268	3,250,284
Agricultural sciences	1,309,581	1,264,193	1,153,236	1,095,407	1,084,458	1,070,715	987,335	924,272
Biological sciences	1,347,409	1,316,037	1,240,603	1,205,583	1,151,564	1,099,328	998,772	887,569
Medical sciences	2,354,031	2,239,101	2,098,987	1,951,410	1,848,545	1,695,678	1,481,628	1,314,643
Other, n.e.c.	210,089	200,717	186,489	175,118	172,325	159,874	147,533	123,800
Psychology	115,241	115,365	113,015	111,259	110,580	94,474	86,464	78,155
Social sciences	658,711	613,842	580,585	542,803	521,449	486,059	468,675	412,248
Economics	177,886	167,763	164,590	152,082	153,561	147,109	144,912	131,179
Political science	118,738	110,640	108,375	106,073	106,178	95,846	89,214	76,761
Sociology	107,371	106,430	96,105	88,837	78,969	80,919	69,819	63,040
Other, n.e.c.	254,716	229,009	211,515	195,811	182,741	162,185	164,730	141,268
Other sciences, n.e.c.	238,920	227,317	238,284	231,844	209,393	215,720	194,555	188,540

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-9. R&D expenditures at public universities and colleges, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	15,531,711	14,977,993	14,128,090	13,373,881	12,546,453	11,738,524	10,760,820	9,810,955
	Source of funds							
Federal Government	8,423,888	8,111,251	7,645,050	7,169,411	6,598,449	6,051,435	5,623,079	5,193,851
State and local governments	1,564,222	1,503,120	1,392,586	1,415,778	1,352,237	1,330,844	1,190,387	1,100,017
Industry	1,062,281	1,001,751	941,675	895,180	843,620	789,352	733,583	632,960
Institutional funds	3,489,881	3,415,084	3,213,790	2,981,318	2,907,444	2,784,537	2,507,759	2,246,064
All other sources	991,439	946,787	934,988	912,194	844,703	782,356	706,012	638,063
	Field							
Engineering, total	2,571,638	2,426,846	2,272,562	2,112,772	2,034,900	1,959,665	1,761,945	1,550,292
Aeronautical and astronautical	136,175	140,143	120,639	125,689	119,798	108,820	95,061	81,977
Chemical	223,765	205,687	190,393	185,635	173,131	154,372	143,084	120,642
Civil	376,581	356,491	329,210	304,164	274,021	256,866	229,027	192,701
Electrical	582,253	537,648	463,736	418,862	425,081	417,620	402,949	358,456
Mechanical	349,210	345,814	303,147	293,256	276,387	264,300	244,052	206,903
Metallurgical and materials [1]	270,061	252,184	237,887	220,548	210,856	228,370	199,757	..
Other, n.e.c.	633,593	588,879	627,550	564,618	555,626	529,317	448,015	589,613
All sciences, total	12,960,073	12,551,147	11,855,528	11,261,109	10,511,553	9,778,859	8,998,875	8,260,663
Physical sciences	1,443,826	1,463,644	1,408,382	1,379,571	1,289,403	1,219,075	1,123,592	1,014,999
Astronomy	188,502	215,490	185,444	174,596	154,264	142,843	113,828	95,944
Chemistry	537,313	524,220	513,681	499,109	466,455	442,061	415,451	389,047
Physics	585,961	588,534	570,193	572,420	560,007	527,442	509,668	464,814
Other, n.e.c.	132,050	135,400	139,064	133,446	108,677	106,729	84,645	65,194
Environmental sciences	1,175,315	1,142,724	1,106,451	1,030,863	964,023	848,723	811,756	739,930
Atmospheric	190,959	175,538	164,519	175,405	161,280	143,964	142,609	131,530
Earth sciences	334,041	350,220	353,639	314,527	309,233	283,657	260,128	232,378
Oceanography	467,821	427,168	401,568	373,552	345,519	308,172	300,496	272,743
Other, n.e.c.	182,494	189,797	186,724	167,379	147,991	112,930	108,523	103,279
Mathematical sciences	173,266	167,220	166,564	157,721	145,439	135,185	128,714	120,492
Computer sciences	343,640	342,492	324,481	294,240	283,853	293,018	249,725	209,018
Life sciences	8,410,087	8,105,636	7,618,836	7,229,412	6,769,768	6,271,053	5,725,925	5,310,596
Agricultural sciences	1,838,353	1,763,401	1,611,622	1,511,337	1,466,962	1,408,057	1,301,176	1,233,725
Biological sciences	2,488,743	2,440,117	2,366,421	2,238,119	2,067,924	1,939,823	1,779,766	1,642,570
Medical sciences	3,809,164	3,639,547	3,383,424	3,229,220	2,981,301	2,666,455	2,418,823	2,230,100
Other, n.e.c.	273,827	262,572	257,369	250,736	253,581	256,718	226,160	204,201
Psychology	270,487	263,202	250,202	242,902	226,748	195,693	169,689	156,549
Social sciences	842,965	762,987	704,565	663,814	595,555	565,819	525,336	455,947
Economics	225,755	207,601	198,391	187,138	174,563	160,828	150,156	136,931
Political science	117,490	108,307	97,118	87,963	80,652	80,369	75,908	61,304
Sociology	176,850	164,702	144,183	134,839	116,456	111,799	93,788	79,506
Other, n.e.c.	322,869	282,375	264,874	253,874	223,884	212,823	205,484	178,206
Other sciences, n.e.c.	300,487	303,242	276,046	262,586	236,764	250,293	264,138	253,132

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990

NOTE: Because of rounding, detail may not add to totals

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-10. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	8,423,888	8,111,251	7,645,050	7,169,411	6,598,449	6,051,435	5,623,079	5,193,851
Engineering, total	1,375,482	1,270,140	1,172,666	1,071,701	1,009,607	962,051	877,832	766,133
Aeronautical and astronautical	88,828	95,202	83,180	89,160	85,594	77,422	69,880	60,351
Chemical	114,667	100,835	94,189	89,204	76,373	67,907	64,593	55,079
Civil	149,055	139,263	117,489	111,661	103,050	90,145	84,605	71,123
Electrical	361,420	321,835	269,860	240,680	243,307	245,133	242,531	212,111
Mechanical	205,194	198,295	169,714	160,921	141,398	134,038	127,410	109,137
Metallurgical and materials[1]	126,172	122,775	109,646	99,688	90,226	106,545	93,564	--
Other, n.e.c.	330,146	291,935	328,587	280,387	269,659	240,861	195,249	258,332
All sciences, total	7,048,406	6,841,111	6,472,384	6,097,710	5,588,842	5,089,384	4,745,247	4,427,718
Physical sciences	951,067	968,906	921,226	892,499	841,298	781,740	740,340	666,915
Astronomy	110,693	134,660	114,175	99,237	90,094	82,895	68,263	55,261
Chemistry	353,561	344,343	329,793	319,768	299,581	275,740	266,997	256,550
Physics	403,084	404,578	389,351	390,062	388,847	364,723	355,746	321,030
Other, n.e.c.	83,729	85,325	87,906	83,432	62,776	58,382	49,334	34,074
Environmental sciences	745,183	718,712	692,881	628,861	561,443	477,089	465,796	430,171
Atmospheric	146,640	133,671	125,322	128,318	110,496	102,511	104,039	99,212
Earth sciences	172,054	183,021	184,861	160,192	154,004	135,126	123,808	111,341
Oceanography	321,645	292,163	275,699	252,022	232,455	190,596	193,498	182,448
Other, n.e.c.	104,843	109,857	106,999	88,329	64,488	48,856	44,451	37,170
Mathematical sciences	107,815	106,487	104,019	101,074	92,486	86,205	78,329	73,202
Computer sciences	210,470	206,190	192,010	167,536	160,738	162,324	125,698	109,511
Life sciences	4,422,737	4,257,202	4,036,006	3,809,973	3,510,670	3,184,507	2,950,381	2,801,613
Agricultural sciences	541,653	516,905	478,738	433,287	403,692	364,585	341,229	337,291
Biological sciences	1,471,381	1,434,276	1,411,889	1,326,132	1,214,083	1,112,975	1,028,831	981,446
Medical sciences	2,275,548	2,175,568	2,015,107	1,925,402	1,765,440	1,568,087	1,461,732	1,371,695
Other, n.e.c.	134,155	130,453	130,273	125,152	127,455	138,860	118,589	111,181
Psychology	183,037	174,782	164,256	158,308	144,854	124,120	103,449	96,354
Social sciences	310,438	274,866	253,043	243,666	199,750	187,442	166,952	145,484
Economics	73,325	65,296	63,902	66,228	55,716	49,035	44,055	41,368
Political science	32,463	29,908	24,246	22,125	17,969	15,837	14,121	12,913
Sociology	87,854	75,230	66,444	64,207	54,759	47,385	38,975	32,149
Other, n.e.c.	116,796	104,433	98,450	91,106	71,306	75,185	69,801	59,054
Other sciences, n.e.c.	117,659	133,966	108,944	95,793	77,603	85,957	114,302	104,468

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-11. Non-Federal R&D expenditures at public universities and colleges, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	7,107,823	6,866,743	6,483,040	6,204,470	5,948,004	5,687,089	5,137,741	4,617,104
	Source of funds							
State and local governments	1,564,222	1,503,120	1,392,586	1,415,778	1,352,237	1,330,844	1,190,387	1,100,017
Industry	1,062,281	1,001,751	941,675	895,180	843,620	789,352	733,583	632,960
Institutional funds	3,489,881	3,415,084	3,213,790	2,981,318	2,907,444	2,784,537	2,507,759	2,246,064
All other sources	991,439	946,787	934,988	912,194	844,703	782,356	706,012	638,063
	Field							
Engineering, total	1,196,156	1,156,706	1,099,896	1,041,071	1,025,293	997,614	884,113	784,159
Aeronautical and astronautical	47,347	44,941	37,459	36,529	34,204	31,398	25,181	21,626
Chemical	109,098	104,852	96,204	96,431	96,758	86,465	78,491	65,563
Civil	227,526	217,228	211,721	192,503	170,971	166,721	144,422	121,578
Electrical	220,833	215,813	193,876	178,182	181,774	172,487	160,418	146,345
Mechanical	144,016	147,519	133,433	132,335	134,989	130,262	116,642	97,766
Metallurgical and materials[1]	143,889	129,410	128,241	120,860	120,630	121,825	106,193	
Other, n.e.c.	303,447	296,943	298,963	284,231	285,967	288,456	252,766	331,281
All sciences, total	5,911,667	5,710,037	5,383,144	5,163,399	4,922,711	4,689,475	4,253,628	3,832,945
Physical sciences	492,760	494,739	487,157	487,072	448,105	437,335	383,252	348,084
Astronomy	77,809	80,830	71,269	75,359	64,170	59,948	45,565	40,683
Chemistry	183,753	179,877	183,888	179,341	166,874	166,321	148,454	132,497
Physics	182,877	183,956	180,842	182,358	171,160	162,719	153,922	143,784
Other, n.e.c.	48,321	50,075	51,158	50,014	45,901	48,347	35,311	31,120
Environmental sciences	430,132	424,012	413,570	402,002	402,580	371,634	345,960	309,759
Atmospheric	44,319	41,867	39,197	47,087	50,784	41,453	38,570	32,318
Earth sciences	161,987	167,199	168,779	154,335	155,229	148,531	136,320	121,037
Oceanography	146,176	135,006	125,869	121,530	113,064	117,576	106,998	90,295
Other, n.e.c.	77,651	79,940	79,725	79,050	83,503	64,074	64,072	66,109
Mathematical sciences	65,452	60,733	62,544	56,647	52,953	48,980	50,385	47,290
Computer sciences	133,170	136,302	132,472	126,704	123,115	130,694	124,027	99,507
Life sciences	3,987,350	3,848,434	3,582,830	3,419,439	3,259,098	3,086,546	2,775,544	2,508,983
Agricultural sciences	1,296,700	1,246,495	1,132,884	1,078,050	1,063,270	1,043,472	959,947	896,434
Biological sciences	1,017,362	1,005,842	954,532	911,987	853,841	826,848	750,935	661,124
Medical sciences	1,533,616	1,463,979	1,368,318	1,303,818	1,215,861	1,098,368	957,091	858,405
Other, n.e.c.	139,672	132,119	127,096	125,584	126,126	117,858	107,571	93,020
Psychology	87,450	88,420	85,947	84,594	81,894	71,573	66,240	60,195
Social sciences	532,527	488,120	451,523	420,148	395,805	378,377	358,384	310,463
Economics	152,430	142,306	134,488	120,910	118,847	111,793	106,101	95,563
Political science	85,027	78,399	72,872	65,838	62,683	64,532	61,787	48,391
Sociology	88,996	89,473	77,739	70,632	61,697	64,414	54,813	47,357
Other, n.e.c.	206,073	177,943	166,424	162,768	152,578	137,638	135,683	119,152
Other sciences, n.e.c.	182,827	169,276	167,102	166,793	159,161	164,336	149,836	148,664

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-12. R&D expenditures at private universities and colleges, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	7,463,752	7,229,260	6,922,573	6,574,467	6,269,633	5,845,493	5,524,502	5,165,249
	Source of funds							
Federal Government	5,386,176	5,244,286	5,023,235	4,784,680	4,492,167	4,181,388	4,013,653	3,795,929
State and local governments	160,857	177,425	148,591	142,478	137,856	142,488	133,357	123,208
Industry	513,392	481,112	472,041	465,844	436,061	415,325	394,153	361,921
Institutional funds	742,230	656,608	634,565	607,392	639,628	581,952	497,964	451,382
All other sources	661,097	669,829	644,141	574,073	563,921	524,340	485,375	432,809
	Field							
Engineering, total	1,103,169	1,073,609	1,068,302	1,043,106	1,027,720	947,229	894,635	842,086
Aeronautical and astronautical	93,548	97,691	93,447	86,912	76,786	71,387	68,552	66,454
Chemical	87,475	90,838	87,839	87,997	87,809	89,631	75,095	73,032
Civil	73,395	68,838	69,896	67,126	65,411	58,123	55,245	52,454
Electrical	293,503	279,603	278,774	279,267	278,576	261,472	259,943	236,497
Mechanical	170,789	172,662	195,312	189,612	174,183	156,549	146,552	136,085
Metallurgical and materials [1]	90,045	76,341	71,112	78,375	83,090	75,251	73,767	..
Other, n.e.c.	294,413	287,635	271,922	253,817	261,865	234,816	215,481	277,564
All sciences, total	6,360,584	6,155,651	5,854,271	5,531,361	5,241,913	4,898,264	4,629,867	4,323,163
Physical sciences	816,455	787,367	763,604	750,729	765,679	719,568	683,385	632,047
Astronomy	90,596	91,291	83,337	83,924	83,788	68,292	56,601	41,372
Chemistry	263,671	247,629	245,564	241,112	238,047	228,624	232,287	217,391
Physics	404,135	392,868	380,485	368,070	361,169	353,844	332,140	321,031
Other, n.e.c.	58,052	55,579	54,219	57,623	82,675	68,808	62,357	52,253
Environmental sciences	302,558	301,732	300,998	286,083	276,184	268,668	256,135	263,438
Atmospheric	34,445	35,324	42,561	35,000	32,896	30,590	30,677	33,722
Earth sciences	118,756	113,376	110,869	101,817	103,592	100,586	94,354	91,423
Oceanography	50,005	50,231	53,730	85,021	82,451	81,681	76,898	85,927
Other, n.e.c.	99,352	102,801	93,838	64,245	57,245	55,811	54,206	52,366
Mathematical sciences	115,722	113,138	115,695	114,434	102,205	94,910	92,974	94,100
Computer sciences	358,548	344,707	323,594	313,439	271,514	261,351	264,932	263,595
Life sciences	4,286,563	4,121,124	3,878,423	3,621,654	3,426,429	3,200,932	2,999,858	2,750,291
Agricultural sciences	51,842	55,019	54,181	47,454	45,338	50,375	48,126	48,308
Biological sciences	1,482,238	1,426,029	1,368,593	1,297,435	1,235,461	1,123,763	1,079,032	997,128
Medical sciences	2,545,758	2,432,659	2,255,633	2,094,506	1,982,407	1,879,948	1,735,488	1,588,417
Other, n.e.c.	206,725	207,416	200,015	182,259	163,223	146,846	137,212	116,438
Psychology	101,818	104,575	107,072	106,796	101,745	87,449	83,135	77,062
Social sciences	260,746	256,513	249,343	232,523	219,784	184,122	177,734	177,322
Economics	44,932	42,179	44,619	44,106	46,988	47,981	50,432	49,937
Political science	67,907	66,304	65,518	63,121	61,443	44,687	39,419	42,049
Sociology	57,732	49,549	51,730	48,486	46,807	43,824	38,055	39,580
Other, n.e.c.	90,175	98,481	87,476	76,810	64,546	47,630	49,828	45,756
Other sciences, n.e.c.	118,173	126,495	115,542	105,703	78,373	81,264	71,714	65,308

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-13. Federally financed R&D expenditures at private universities and colleges, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	5,386,176	5,244,286	5,023,235	4,784,680	4,492,167	4,181,388	4,013,653	3,795,929
Engineering, total	840,873	828,010	817,648	786,229	742,993	676,064	648,092	617,624
Aeronautical and astronautical	79,095	85,399	78,836	70,679	65,265	60,216	57,236	54,637
Chemical	56,463	60,198	56,259	53,611	49,852	50,099	45,769	45,828
Civil	47,433	44,389	46,136	42,684	40,593	33,501	32,402	31,045
Electrical	230,782	223,179	220,195	217,738	206,152	190,744	189,289	174,519
Mechanical	134,472	141,142	156,756	149,072	127,459	117,280	110,793	104,991
Metallurgical and materials [1]	63,978	51,982	45,366	50,750	53,033	46,554	45,569	..
Other, n.e.c.	228,650	221,720	214,099	201,695	200,639	177,670	167,034	206,604
All sciences, total	4,545,303	4,416,276	4,205,588	3,998,451	3,749,174	3,505,324	3,365,561	3,178,305
Physical sciences	688,323	670,517	642,581	620,134	634,246	601,550	574,907	530,776
Astronomy	74,504	73,948	67,482	65,794	68,256	53,123	44,451	32,680
Chemistry	206,697	191,905	190,235	185,404	180,030	175,367	177,917	165,416
Physics	356,831	354,708	335,990	318,104	319,182	314,903	296,377	285,110
Other, n.e.c.	50,290	49,956	48,874	50,832	66,778	58,157	56,162	47,570
Environmental sciences	246,586	247,579	256,060	240,145	229,176	223,046	214,994	220,191
Atmospheric	31,163	32,792	39,321	32,316	29,577	26,873	27,071	29,594
Earth sciences	96,458	90,733	88,698	83,074	84,187	82,846	80,707	75,446
Oceanography	41,025	42,616	47,909	77,468	74,024	72,938	68,600	77,472
Other, n.e.c.	79,941	81,438	80,132	47,287	41,388	40,389	38,616	37,679
Mathematical sciences	101,548	98,967	101,679	101,965	90,708	84,280	82,539	84,087
Computer sciences	298,190	278,587	270,932	255,783	219,060	209,225	216,623	214,322
Life sciences	2,966,198	2,876,565	2,717,204	2,576,324	2,400,028	2,233,796	2,132,917	1,982,188
Agricultural sciences	16,841	19,570	19,474	16,676	14,049	12,696	11,575	12,159
Biological sciences	1,094,394	1,067,225	1,036,315	984,040	922,881	837,067	815,421	754,732
Medical sciences	1,720,482	1,653,525	1,522,244	1,444,099	1,347,926	1,280,583	1,209,661	1,130,891
Other, n.e.c.	134,482	136,246	139,172	131,509	115,172	103,450	96,260	84,406
Psychology	71,002	74,625	77,317	76,077	70,048	62,162	60,357	56,727
Social sciences	116,743	114,357	106,274	94,693	81,548	65,275	59,325	66,770
Economics	17,719	14,457	12,088	11,073	10,229	10,634	10,291	12,948
Political science	30,272	30,008	26,023	20,702	17,076	12,704	11,243	12,971
Sociology	34,089	29,201	30,259	26,871	26,951	24,638	21,014	21,734
Other, n.e.c.	34,663	40,691	37,904	36,047	27,292	17,299	16,777	19,117
Other sciences, n.e.c.	54,712	55,080	33,540	33,330	24,360	25,990	23,899	23,244

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-14. Non-Federal R&D expenditures at private universities and colleges, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	2,077,576	1,984,974	1,899,338	1,789,787	1,777,466	1,664,105	1,510,849	1,369,320
	Source of funds							
State and local governments	160,857	177,425	148,591	142,478	137,856	142,488	133,357	123,208
Industry	513,392	481,112	472,041	465,844	436,061	415,325	394,153	361,921
Institutional funds	742,230	656,608	634,565	607,392	639,628	581,952	497,964	451,382
All other sources	661,097	669,829	644,141	574,073	563,921	524,340	485,375	432,809
	Field							
Engineering, total	262,295	245,599	250,655	256,877	284,727	271,165	246,543	224,462
Aeronautical and astronautical	14,453	12,292	14,611	16,233	11,521	11,171	11,316	11,817
Chemical	31,012	30,640	31,580	34,386	37,957	39,532	29,326	27,204
Civil	25,962	24,449	23,760	24,442	24,818	24,622	22,843	21,409
Electrical	62,721	56,424	58,579	61,529	72,424	70,728	70,654	61,978
Mechanical	36,317	31,520	38,556	40,540	46,724	39,269	35,759	31,094
Metallurgical and materials[1]	26,067	24,359	25,746	27,625	30,057	28,697	28,198	
Other, n.e.c.	65,763	65,915	57,823	52,122	61,226	57,146	48,447	70,960
All sciences, total	1,815,280	1,739,375	1,648,684	1,532,910	1,492,739	1,392,940	1,264,306	1,144,858
Physical sciences	128,132	116,850	121,023	130,595	131,433	118,018	108,478	101,271
Astronomy	16,092	17,343	15,855	18,130	15,532	15,169	12,150	8,692
Chemistry	56,974	55,725	55,329	55,708	58,017	53,257	54,370	51,975
Physics	47,303	38,160	44,495	49,966	41,987	38,941	35,763	35,921
Other, n.e.c.	7,762	5,623	5,345	6,791	15,897	10,651	6,195	4,683
Environmental sciences	53,972	54,154	44,938	45,938	47,008	45,622	41,141	43,247
Atmospheric	3,282	2,532	3,240	2,684	3,319	3,717	3,606	4,128
Earth sciences	22,299	22,643	22,170	18,743	19,405	17,740	13,647	15,977
Oceanography	8,980	7,615	5,821	7,553	8,427	8,743	8,298	8,455
Other, n.e.c.	19,411	21,363	13,706	16,958	15,857	15,422	15,590	14,687
Mathematical sciences	14,174	14,172	14,017	12,469	11,497	10,630	10,435	10,013
Computer sciences	60,358	66,120	52,662	57,656	52,454	52,126	48,309	49,273
Life sciences	1,320,365	1,244,558	1,161,218	1,045,330	1,026,401	967,136	866,941	768,103
Agricultural sciences	35,002	35,450	34,708	30,778	31,289	37,679	36,551	36,149
Biological sciences	387,844	358,805	332,279	313,395	312,580	286,696	263,611	242,396
Medical sciences	825,276	779,134	733,389	650,407	634,481	599,365	525,827	457,526
Other, n.e.c.	72,243	71,170	60,843	50,750	48,051	43,396	40,952	32,032
Psychology	30,816	29,951	29,755	30,719	31,697	25,287	22,778	20,335
Social sciences	144,004	142,155	143,068	137,830	138,236	118,847	118,409	110,552
Economics	27,214	27,722	32,531	33,033	36,759	37,347	40,141	36,989
Political science	37,635	36,296	39,495	42,419	44,367	31,983	28,176	29,078
Sociology	23,643	20,347	21,471	21,615	19,856	19,186	17,041	17,846
Other, n.e.c.	55,512	57,791	49,572	40,763	37,254	30,331	33,051	26,639
Other sciences, n.e.c.	63,460	71,415	82,001	72,373	54,013	55,274	47,815	42,064

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: – = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-15. R&D expenditures at doctorate-granting institutions, by source of funds, science and engineering field, and control: fiscal years 1989, 1995, and 1996

[Dollars in thousands]

Source and field	Total			Public			Private		
	1996	1995	1989	1996	1995	1989	1996	1995	1989
Total	22,480,793	21,730,592	14,770,253	15,130,558	14,594,295	9,654,909	7,350,235	7,136,297	5,115,344
	Source of funds								
Federal Government	13,502,516	13,067,900	8,859,110	8,190,192	7,889,372	5,095,091	5,312,324	5,178,528	3,764,019
State and local governments	1,688,524	1,638,410	1,202,659	1,530,144	1,464,293	1,081,321	158,380	174,117	121,338
Industry	1,548,331	1,454,608	978,663	1,041,973	977,824	622,387	506,358	476,784	356,276
Institutional funds	4,124,310	3,980,006	2,672,272	3,394,914	3,331,988	2,226,854	729,396	648,018	445,418
All other sources	1,617,112	1,589,668	1,057,549	973,335	930,818	629,256	643,777	658,850	428,293
	Field								
Engineering, total	3,611,532	3,440,798	2,364,695	2,520,979	2,378,627	1,529,003	1,090,553	1,062,171	835,692
Aeronautical and astronautical	226,970	235,059	145,743	133,508	137,368	79,383	93,462	97,691	66,360
Chemical	308,601	294,527	191,837	221,126	203,849	119,165	87,475	90,678	72,672
Civil	440,359	415,635	241,245	367,266	347,036	189,564	73,093	68,599	51,681
Electrical	857,368	801,947	589,072	567,225	525,441	354,154	290,143	276,506	234,918
Mechanical	504,678	504,618	337,588	336,428	334,123	203,286	168,250	170,495	134,302
Metallurgical and materials [1]	359,630	328,244	..	269,585	251,953	..	90,045	76,291	..
Other, n.e.c.	913,926	860,768	859,210	625,841	578,857	583,451	288,085	281,911	275,759
All sciences, total	18,869,261	18,289,794	12,405,558	12,609,579	12,215,668	8,125,906	6,259,682	6,074,126	4,279,652
Physical sciences	2,177,657	2,179,076	1,608,371	1,389,754	1,410,693	988,178	787,903	768,383	620,193
Astronomy	275,913	301,693	136,552	187,853	212,423	95,716	88,060	89,270	40,836
Chemistry	752,319	731,959	584,478	505,512	493,876	373,974	246,807	238,083	210,504
Physics	961,913	956,210	771,429	566,651	570,348	454,661	395,262	385,862	316,768
Other, n.e.c.	187,512	189,214	115,912	129,738	134,046	63,827	57,774	55,168	52,085
Environmental sciences	1,407,482	1,381,487	984,494	1,111,610	1,086,275	724,327	295,872	295,212	260,167
Atmospheric	220,144	204,756	161,820	189,770	173,893	130,103	30,374	30,863	31,717
Earth sciences	426,883	441,532	318,438	310,075	329,524	228,016	116,808	112,008	90,422
Oceanography	490,453	450,424	353,181	440,711	400,448	267,316	49,742	49,976	85,865
Other, n.e.c.	270,002	284,775	151,055	171,054	182,410	98,892	98,948	102,365	52,163
Mathematical sciences	273,601	265,007	209,535	164,132	158,960	117,121	109,469	106,047	92,414
Computer sciences	678,483	668,660	465,244	325,046	329,404	203,198	353,437	339,256	262,046
Life sciences	12,501,127	12,047,076	7,979,581	8,252,570	7,951,065	5,247,280	4,248,557	4,096,011	2,732,301
Agricultural sciences	1,827,867	1,758,239	1,250,324	1,780,144	1,707,664	1,203,977	47,723	50,575	46,347
Biological sciences	3,854,426	3,761,214	2,597,790	2,396,671	2,352,391	1,613,711	1,457,755	1,408,823	984,079
Medical sciences	6,343,166	6,063,739	3,813,724	3,805,634	3,634,301	2,227,461	2,537,532	2,429,438	1,586,263
Other, n.e.c.	475,668	463,884	317,743	270,121	256,709	202,131	205,547	207,175	115,612
Psychology	359,469	349,817	224,996	262,771	253,029	150,589	96,698	96,788	74,407
Social sciences	1,066,161	987,697	619,145	815,316	737,835	444,814	250,845	249,862	174,331
Economics	266,135	244,259	184,602	221,632	202,329	135,064	44,503	41,930	49,538
Political science	180,119	169,743	102,123	114,951	106,103	60,407	65,168	63,640	41,716
Sociology	220,984	206,538	115,099	168,435	159,646	77,051	52,549	46,892	38,048
Other, n.e.c.	398,923	367,157	217,321	310,298	269,757	172,292	88,625	97,400	45,029
Other sciences, n.e.c.	405,281	410,974	314,192	288,380	288,407	250,399	116,901	122,567	63,793

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-16. Federally financed R&D expenditures at doctorate-granting institutions, by science and engineering field, and control: fiscal years 1989, 1995, and 1996

[Dollars in thousands]

Field	Total			Public			Private		
	1996	1995	1989	1996	1995	1989	1996	1995	1989
Total	13,502,516	13,067,900	8,859,110	8,190,192	7,889,372	5,095,091	5,312,324	5,178,528	3,764,019
Engineering, total	2,170,862	2,057,175	1,367,917	1,337,744	1,237,162	752,894	833,118	820,013	615,023
Aeronautical and astronautical	166,103	178,050	112,509	87,008	92,651	57,955	79,095	85,399	54,554
Chemical	169,184	159,568	99,573	112,721	99,526	53,923	56,463	60,042	45,650
Civil	191,906	179,858	100,514	144,657	135,708	69,949	47,249	44,150	30,565
Electrical	576,463	531,155	383,343	347,866	310,919	209,273	228,597	220,236	174,070
Mechanical	327,961	329,450	210,887	195,631	190,323	106,438	132,330	139,127	104,449
Metallurgical and materials[1]	189,785	174,545	..	125,807	122,563	..	63,978	51,982	..
Other, n.e.c.	549,460	504,549	461,091	324,054	285,472	255,356	225,406	219,077	205,735
All sciences, total	11,331,654	11,010,725	7,491,193	6,852,448	6,652,210	4,342,197	4,479,206	4,358,515	3,148,996
Physical sciences	1,582,148	1,586,873	1,170,856	912,320	930,135	647,629	669,828	656,738	523,227
Astronomy	183,793	205,637	87,420	110,198	132,640	55,138	73,595	72,997	32,282
Chemistry	524,900	506,441	406,909	329,253	321,405	245,384	195,647	185,036	161,525
Physics	740,859	740,573	595,743	390,285	391,417	313,892	350,574	349,156	281,851
Other, n.e.c.	132,596	134,222	80,784	82,584	84,673	33,215	50,012	49,549	47,569
Environmental sciences	959,243	933,817	638,512	716,343	692,033	420,871	242,900	241,784	217,641
Atmospheric	172,955	161,061	125,792	145,863	132,730	98,203	27,092	28,331	27,589
Earth sciences	258,197	265,998	184,187	162,841	176,116	109,200	95,356	89,882	74,987
Oceanography	347,084	319,018	256,446	306,306	276,649	178,998	40,778	42,369	77,448
Other, n.e.c.	181,007	187,740	72,087	101,333	106,538	34,470	79,674	81,202	37,617
Mathematical sciences	198,475	195,835	153,963	101,345	100,409	70,941	97,130	95,426	83,022
Computer sciences	493,732	475,208	319,175	199,461	201,050	105,675	294,271	274,158	213,500
Life sciences	7,280,017	7,027,028	4,729,297	4,338,972	4,169,157	2,760,182	2,941,045	2,857,871	1,969,115
Agricultural sciences	518,286	494,046	326,052	505,020	478,760	315,708	13,266	15,286	10,344
Biological sciences	2,507,017	2,445,177	1,710,221	1,428,047	1,390,085	964,153	1,078,970	1,055,092	746,068
Medical sciences	3,989,135	3,824,638	2,499,081	2,273,908	2,173,154	1,370,110	1,715,227	1,651,484	1,128,971
Other, n.e.c.	265,579	263,167	193,943	131,997	127,158	110,211	133,582	136,009	83,732
Psychology	244,228	234,452	146,841	177,309	166,687	92,176	66,919	67,765	54,665
Social sciences	407,450	373,855	206,897	294,269	261,838	141,462	113,181	112,017	65,435
Economics	88,249	76,496	53,423	70,554	62,039	40,585	17,695	14,457	12,838
Political science	61,381	59,103	25,362	31,228	29,174	12,531	30,153	29,929	12,831
Sociology	113,613	100,108	52,059	82,306	72,710	31,267	31,307	27,398	20,792
Other, n.e.c.	144,207	138,148	76,053	110,181	97,915	57,079	34,026	40,233	18,974
Other sciences, n.e.c.	166,361	183,657	125,652	112,429	130,901	103,261	53,932	52,756	22,391

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-17. Non-Federal R&D expenditures at doctorate-granting institutions, by source of funds, science and engineering field, and control: fiscal years 1989, 1995, and 1996

[Dollars in thousands]

Source and field	Total			Public			Private		
	1996	1995	1989	1996	1995	1989	1996	1995	1989
Total	8,978,277	8,662,692	5,911,143	6,940,366	6,704,923	4,559,818	2,037,911	1,957,769	1,351,325
	Source of funds								
State and local governments	1,688,524	1,638,410	1,202,659	1,530,144	1,464,293	1,081,321	158,380	174,117	121,338
Industry	1,548,331	1,454,608	978,663	1,041,973	977,824	622,387	506,358	476,784	356,276
Institutional funds	4,124,310	3,980,006	2,672,272	3,394,914	3,331,988	2,226,854	729,396	648,018	445,418
All other sources	1,617,112	1,589,668	1,057,549	973,335	930,818	629,256	643,777	658,850	428,293
	Field								
Engineering, total	1,440,670	1,383,623	996,778	1,183,235	1,141,465	776,109	257,435	242,158	220,669
Aeronautical and astronautical	60,867	57,009	33,234	46,500	44,717	21,428	14,367	12,292	11,806
Chemical	139,417	134,959	92,264	108,405	104,323	65,242	31,012	30,636	27,022
Civil	248,453	235,777	140,731	222,609	211,328	119,615	25,844	24,449	21,116
Electrical	280,905	270,792	205,729	219,359	214,522	144,881	61,546	56,270	60,848
Mechanical	176,717	175,168	126,701	140,797	143,800	96,848	35,920	31,368	29,853
Metallurgical and materials[1]	169,845	153,699	--	143,778	129,390	--	26,067	24,309	--
Other, n.e.c.	364,466	356,219	398,119	301,787	293,385	328,095	62,679	62,834	70,024
All sciences, total	7,537,607	7,279,069	4,914,365	5,757,131	5,563,458	3,783,709	1,780,476	1,715,611	1,130,656
Physical sciences	595,509	592,203	437,515	477,434	480,558	340,549	118,075	111,645	96,966
Astronomy	92,120	96,056	49,132	77,655	79,783	40,578	14,465	16,273	8,554
Chemistry	227,419	225,518	177,569	176,259	172,471	128,590	51,160	53,047	48,979
Physics	221,054	215,637	175,686	176,366	178,931	140,769	44,688	36,706	34,917
Other, n.e.c.	54,916	54,992	35,128	47,154	49,373	30,612	7,762	5,619	4,516
Environmental sciences	448,239	447,670	345,982	395,267	394,242	303,456	52,972	53,428	42,526
Atmospheric	47,189	43,695	36,028	43,907	41,163	31,900	3,282	2,532	4,128
Earth sciences	168,686	175,534	134,251	147,234	153,408	118,816	21,452	22,126	15,435
Oceanography	143,369	131,406	96,735	134,405	123,799	88,318	8,964	7,607	8,417
Other, n.e.c.	88,995	97,035	78,968	69,721	75,872	64,422	19,274	21,163	14,546
Mathematical sciences	75,126	69,172	55,572	62,787	58,551	46,180	12,339	10,621	9,392
Computer sciences	184,751	193,452	146,069	125,585	128,354	97,523	59,166	65,098	48,546
Life sciences	5,221,110	5,020,048	3,250,284	3,913,598	3,781,908	2,487,098	1,307,512	1,238,140	763,186
Agricultural sciences	1,309,581	1,264,193	924,272	1,275,124	1,228,904	888,269	34,457	35,289	36,003
Biological sciences	1,347,409	1,316,037	887,569	968,624	962,306	649,558	378,785	353,731	238,011
Medical sciences	2,354,031	2,239,101	1,314,643	1,531,726	1,461,147	857,351	822,305	777,954	457,292
Other, n.e.c.	210,089	200,717	123,800	138,124	129,551	91,920	71,965	71,166	31,880
Psychology	115,241	115,365	78,155	85,462	86,342	58,413	29,779	29,023	19,742
Social sciences	658,711	613,842	412,248	521,047	475,997	303,352	137,664	137,845	108,896
Economics	177,886	167,763	131,179	151,078	140,290	94,479	26,808	27,473	36,700
Political science	118,738	110,640	76,761	83,723	76,929	47,876	35,015	33,711	28,885
Sociology	107,371	106,430	63,040	86,129	86,936	45,784	21,242	19,494	17,256
Other, n.e.c.	254,716	229,009	141,268	200,117	171,842	115,213	54,599	57,167	26,055
Other sciences, n.e.c.	238,920	227,3[illegible]	188,540	175,951	157,506	147,138	62,969	69,811	41,402

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-18. R&D expenditures at historically black colleges and universities, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	263,551	241,367	211,439	191,369	178,777	150,763	142,478	130,939
	Source of funds							
Federal Government	222,592	199,380	174,561	157,207	146,624	122,682	116,827	106,759
State and local governments	11,765	11,153	9,533	8,577	9,053	6,505	6,902	6,883
Industry	6,430	6,481	6,724	4,796	4,145	3,230	5,353	3,966
Institutional funds	20,235	21,007	17,187	17,716	14,977	14,062	11,442	12,086
All other sources	2,529	3,346	3,434	3,073	3,978	4,284	1,954	1,245
	Field							
Engineering, total	42,923	35,456	26,906	21,149	20,733	16,889	13,555	10,529
Aeronautical and astronautical	2,544	2,240	1,553	324	423	170	119	226
Chemical	2,203	2,070	1,355	1,360	1,114	1,171	727	660
Civil	4,043	3,405	2,838	2,503	2,475	1,231	1,022	1,198
Electrical	11,143	8,103	6,842	4,360	4,144	4,133	2,560	2,763
Mechanical	10,849	9,548	7,438	6,860	7,142	4,484	3,612	3,108
Metallurgical and materials[1]	2,212	1,614	190	58	245	1,345	1,375	--
Other, n.e.c.	9,929	8,476	6,690	5,684	5,190	4,355	4,140	2,574
All sciences, total	220,628	205,911	184,533	170,220	158,044	133,874	128,923	120,410
Physical sciences	40,401	41,450	39,458	32,380	29,205	25,410	26,058	21,133
Astronomy	5,853	4,295	2,614	1,576	367	164	0	0
Chemistry	15,212	14,831	13,715	13,551	11,896	11,705	12,469	12,111
Physics	19,108	21,352	22,542	16,395	16,534	13,067	13,329	8,856
Other, n.e.c.	228	972	587	858	408	474	260	166
Environmental sciences	17,231	15,567	6,087	3,853	3,252	3,844	4,203	2,642
Atmospheric	767	743	732	1,310	667	542	625	388
Earth sciences	2,509	1,756	507	39	592	127	461	526
Oceanography	299	587	653	245	106	27	48	27
Other, n.e.c.	13,656	12,481	4,195	2,259	1,887	3,148	3,069	1,701
Mathematical sciences	6,490	5,715	3,589	5,631	4,375	2,420	1,013	728
Computer sciences	16,793	8,768	5,020	4,686	4,170	5,373	2,664	2,426
Life sciences	120,724	107,580	114,743	106,870	105,159	88,031	83,948	82,691
Agricultural sciences	48,081	49,036	51,099	46,235	45,225	39,154	33,608	34,112
Biological sciences	50,847	43,339	45,477	41,710	44,126	36,269	37,809	36,439
Medical sciences	18,361	13,110	15,428	16,364	12,981	10,445	11,766	11,024
Other, n.e.c.	3,435	2,095	2,739	2,561	2,827	2,163	765	1,116
Psychology	2,133	4,068	3,580	3,326	2,053	1,336	1,706	1,494
Social sciences	9,600	10,218	8,914	9,917	8,528	6,133	7,810	8,032
Economics	1,169	3,196	2,741	3,190	2,847	2,404	1,528	864
Political science	734	427	549	513	371	166	1,028	1,200
Sociology	4,629	3,535	3,162	2,581	2,469	2,373	2,039	1,673
Other, n.e.c.	3,068	3,060	2,462	3,633	2,841	1,190	3,215	4,295
Other sciences, n.e.c.	7,256	12,545	3,142	3,557	1,302	1,327	1,521	1,264

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-19. Federally financed R&D expenditures at historically black colleges and universities, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	222,592	199,380	174,561	157,207	146,624	122,682	116,827	106,759
Engineering, total	37,403	30,856	21,746	15,901	16,034	12,295	11,772	8,008
Aeronautical and astronautical	2,130	2,069	1,420	324	423	170	119	123
Chemical	1,891	1,803	1,091	1,086	852	791	438	586
Civil	2,500	2,564	1,941	1,340	1,314	278	647	880
Electrical	10,340	7,481	5,707	3,781	3,446	3,173	2,096	1,906
Mechanical	9,686	8,566	6,237	5,314	5,467	3,616	3,304	2,787
Metallurgical and materials[1]	1,862	1,526	101	58	245	1,178	1,375	--
Other, n.e.c.	8,994	6,847	5,249	3,998	4,287	3,089	3,793	1,726
All sciences, total	185,189	168,524	152,815	141,306	130,590	110,387	105,055	98,751
Physical sciences	35,445	36,160	32,337	27,472	24,491	21,494	21,742	17,706
Astronomy	5,730	4,095	2,518	1,544	367	164	0	0
Chemistry	13,049	12,882	11,682	12,256	11,043	10,359	10,740	10,292
Physics	16,490	18,322	17,596	13,077	12,685	10,553	10,807	7,291
Other, n.e.c.	176	861	541	595	396	418	195	123
Environmental sciences	12,502	5,574	4,377	2,847	1,972	2,028	1,447	1,408
Atmospheric	434	348	236	832	212	104	105	129
Earth sciences	1,348	1,083	37	32	506	96	252	248
Oceanography	183	286	150	212	74	1	22	2
Other, n.e.c.	10,537	3,857	3,954	1,771	1,180	1,827	1,068	1,029
Mathematical sciences	4,251	4,292	2,928	3,276	2,816	1,468	676	486
Computer sciences	13,468	7,016	4,217	4,138	3,533	4,581	2,119	2,037
Life sciences	104,632	94,190	97,711	93,379	90,538	74,910	72,186	71,316
Agricultural sciences	41,858	42,446	44,511	40,019	40,212	34,105	29,139	30,388
Biological sciences	44,382	39,389	39,418	38,201	39,395	32,831	33,441	31,651
Medical sciences	16,119	11,263	12,271	13,603	10,024	6,991	9,341	8,902
Other, n.e.c.	2,273	1,092	1,511	1,556	907	983	265	375
Psychology	1,730	3,676	2,930	3,050	1,597	1,263	1,240	1,108
Social sciences	6,609	7,336	6,477	5,527	4,784	4,219	4,872	3,649
Economics	1,014	2,939	2,595	2,833	2,570	2,137	1,296	755
Political science	450	198	274	107	167	90	433	566
Sociology	3,561	2,564	2,110	1,627	1,478	1,488	652	442
Other, n.e.c.	1,584	1,635	1,498	960	569	504	2,491	1,886
Other sciences, n.e.c.	6,552	10,280	1,838	1,617	859	424	773	1,041

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-20. Non-Federal R&D expenditures at historically black colleges and universities, by source of funds and science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Source and field	1996	1995	1994	1993	1992	1991	1990	1989
Total	40,959	41,987	36,878	34,162	32,153	28,081	25,651	24,180
	Source of funds							
State and local governments	11,765	11,153	9,533	8,577	9,053	6,505	6,902	6,883
Industry	6,430	6,481	6,724	4,796	4,145	3,230	5,353	3,966
Institutional funds	20,235	21,007	17,187	17,716	14,977	14,062	11,442	12,086
All other sources	2,529	3,346	3,434	3,073	3,978	4,284	1,954	1,245
	Field							
Engineering, total	5,520	4,600	5,160	5,248	4,699	4,594	1,783	2,521
Aeronautical and astronautical	414	171	133	0	0	0	0	103
Chemical	312	267	264	274	262	380	289	74
Civil	1,543	841	897	1,163	1,161	953	375	318
Electrical	803	622	1,135	579	698	960	464	857
Mechanical	1,163	982	1,201	1,546	1,675	868	308	321
Metallurgical and materials[1]	350	88	89	0	0	167	0	--
Other, n.e.c.	935	1,629	1,441	1,686	903	1,266	347	848
All sciences, total	35,439	37,387	31,718	28,914	27,454	23,487	23,868	21,659
Physical sciences	4,956	5,290	7,121	4,908	4,714	3,916	4,316	3,427
Astronomy	123	200	96	32	0	0	0	0
Chemistry	2,163	1,949	2,033	1,295	853	1,346	1,729	1,819
Physics	2,618	3,030	4,946	3,318	3,849	2,514	2,522	1,565
Other, n.e.c.	52	111	46	263	12	56	65	43
Environmental sciences	4,729	9,993	1,710	1,006	1,280	1,816	2,756	1,234
Atmospheric	333	395	496	478	455	438	520	259
Earth sciences	1,161	673	470	7	86	31	209	278
Oceanography	116	301	503	33	32	26	26	25
Other, n.e.c.	3,119	8,624	241	488	707	1,321	2,001	672
Mathematical sciences	2,239	1,423	661	2,355	1,559	952	337	242
Computer sciences	3,325	1,752	803	548	637	792	545	389
Life sciences	16,092	13,390	17,032	13,491	14,621	13,121	11,762	11,375
Agricultural sciences	6,223	6,590	6,588	6,216	5,013	5,049	4,469	3,724
Biological sciences	6,465	3,950	6,059	3,509	4,731	3,438	4,368	4,788
Medical sciences	2,242	1,847	3,157	2,761	2,957	3,454	2,425	2,122
Other, n.e.c.	1,162	1,003	1,228	1,005	1,920	1,180	500	741
Psychology	403	392	650	276	456	73	466	386
Social sciences	2,991	2,882	2,437	4,390	3,744	1,914	2,938	4,383
Economics	155	257	146	357	277	267	232	109
Political science	284	229	275	406	204	76	595	634
Sociology	1,068	971	1,052	954	991	885	1,387	1,231
Other, n.e.c.	1,484	1,425	964	2,673	2,272	686	724	2,409
Other sciences, n.e.c.	704	2,265	1,304	1,940	443	903	748	223

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Table B-21. R&D expenditures at universities and colleges, by geographic division and source: fiscal year 1996

[Dollars in millions]

Division	Total	Federal	Non-Federal
Total	22,995	13,810	9,185
New England	1,912	1,283	629
Middle Atlantic	3,437	2,167	1,270
East North Central	3,294	1,828	1,466
West North Central	1,527	755	772
South Atlantic	4,379	2,675	1,704
East South Central	959	558	401
West South Central	2,184	1,073	1,111
Mountain	1,496	885	612
Pacific	3,729	2,543	1,186
Outlying Areas	78	45	33

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-22. R&D expenditures at doctorate-granting institutions, by geographic division, State, and source of funds: fiscal year 1996

[Dollars in thousands]

Division and State	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Total	22,480,793	13,502,516	1,688,524	1,548,331	4,124,310	1,617,112
New England	1,856,701	1,250,630	41,921	133,839	282,470	147,841
Connecticut	388,134	233,933	19,938	23,378	78,954	31,931
Maine	34,684	16,211	1,594	4,214	12,172	493
Massachusetts	1,174,320	827,463	13,060	95,090	142,051	96,656
New Hampshire	98,638	62,987	3,833	3,886	15,024	12,908
Rhode Island	107,266	78,515	972	2,040	23,609	2,130
Vermont	53,659	31,521	2,524	5,231	10,660	3,723
Middle Atlantic	3,362,846	2,119,730	158,951	241,593	538,245	304,327
New Jersey	452,917	215,559	42,815	23,703	141,824	29,016
New York	1,720,183	1,109,586	79,043	94,671	228,373	208,510
Pennsylvania	1,189,746	794,585	37,093	123,219	168,048	66,801
East North Central	3,215,400	1,780,746	215,173	225,284	731,670	262,527
Illinois	875,520	502,140	47,269	48,582	210,915	66,614
Indiana	390,670	203,390	23,733	35,539	108,210	19,798
Michigan	808,117	426,382	48,252	58,656	198,414	76,413
Ohio	655,533	370,837	53,826	64,207	120,413	46,250
Wisconsin	485,560	277,997	42,093	18,300	93,718	53,452
West North Central	1,519,016	751,206	217,021	108,069	348,938	93,782
Iowa	332,402	161,262	49,905	22,285	80,221	18,729
Kansas	181,775	68,823	40,456	12,131	52,546	7,819
Minnesota	341,179	198,927	47,842	23,726	46,739	23,945
Missouri	409,658	223,980	22,882	32,416	95,137	35,243
Nebraska	156,713	51,427	45,335	12,268	43,291	4,392
North Dakota	71,849	35,659	1,555	4,505	27,980	2,150
South Dakota	25,440	11,128	9,046	738	3,024	1,504
South Atlantic	4,220,327	2,594,139	352,242	318,786	735,857	219,303
Delaware	54,154	29,509	2,410	2,964	13,074	6,197
District of Columbia	201,445	147,212	1,446	14,448	21,321	17,018
Florida	596,102	313,555	33,234	32,717	184,422	32,174
Georgia	709,595	335,123	61,783	63,461	222,529	26,699
Maryland	1,212,215	915,752	83,958	57,855	99,341	55,309
North Carolina	725,688	442,804	102,636	85,694	64,095	30,459
South Carolina	217,881	120,015	20,887	10,678	48,596	17,705
Virginia	448,041	259,135	43,599	47,361	68,029	29,917
West Virginia	55,206	31,034	2,289	3,608	14,450	3,825
East South Central	932,312	536,422	82,190	77,337	188,327	48,036
Alabama	342,171	213,713	5,789	29,706	77,329	15,634
Kentucky	148,376	64,756	11,467	19,686	49,194	3,273
Mississippi	124,675	62,497	29,173	11,122	11,600	10,283
Tennessee	317,090	195,456	35,761	16,823	50,204	18,846
West South Central	2,115,715	1,023,134	301,198	153,424	411,718	226,241
Arkansas	93,107	32,815	25,616	8,207	21,184	5,285
Louisiana	307,839	124,414	72,566	23,526	69,492	17,841
Oklahoma	201,626	72,817	30,472	11,804	72,669	13,864
Texas	1,513,143	793,088	172,544	109,887	248,373	189,251
Mountain	1,468,644	863,518	112,331	90,023	335,524	67,248
Arizona	375,881	199,889	8,022	17,099	137,834	13,037
Colorado	406,582	270,221	28,049	23,695	50,997	33,620
Idaho	64,930	18,535	21,555	9,957	14,436	447
Montana	71,518	29,258	13,433	7,000	21,133	694
Nevada	84,970	46,713	3,538	8,042	25,924	753
New Mexico	213,691	137,607	16,842	11,840	39,092	8,310
Utah	210,519	146,304	17,124	10,304	27,828	8,959
Wyoming	40,553	14,991	3,768	2,086	18,280	1,428
Pacific	3,717,113	2,540,781	186,624	197,682	544,876	247,150
Alaska	71,381	30,351	5,842	9,965	25,217	6
California	2,791,208	1,934,114	112,782	139,315	399,131	205,866
Hawaii	73,302	40,198	24,738	453	3,186	4,727
Oregon	276,109	174,616	31,906	8,620	40,769	20,198
Washington	505,113	361,502	11,356	39,329	76,573	16,353
Outlying Areas	72,719	42,210	20,873	2,294	6,685	657

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-23. R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989-96

[Dollars in thousands]

Division and State	1996	1995	1994	1993	1992	1991	1990	1989
Total	22,480,793	21,730,592	20,613,177	19,576,780	18,525,609	17,333,916	16,057,379	14,770,253
New England	1,856,701	1,802,822	1,784,710	1,747,886	1,623,943	1,515,689	1,422,595	1,356,621
Connecticut	388,134	377,225	366,948	364,708	339,674	320,935	302,659	284,410
Maine	34,684	31,901	29,393	24,879	23,213	27,082	23,605	19,974
Massachusetts	1,174,320	1,147,150	1,133,194	1,105,791	1,027,595	953,708	898,804	867,521
New Hampshire	98,638	93,073	101,552	99,475	87,412	78,975	69,731	62,172
Rhode Island	107,266	99,408	101,848	103,194	96,507	88,448	82,634	79,801
Vermont	53,659	54,065	51,775	49,839	49,542	46,541	45,162	42,743
Middle Atlantic	3,362,846	3,302,954	3,128,242	2,937,524	2,827,453	2,650,901	2,526,310	2,356,877
New Jersey	452,917	440,042	406,019	373,816	379,104	352,310	328,236	283,897
New York	1,720,183	1,723,381	1,644,277	1,544,702	1,480,392	1,419,765	1,368,400	1,311,643
Pennsylvania	1,189,746	1,139,531	1,077,946	1,019,006	967,957	878,826	829,674	761,337
East North Central	3,215,400	3,083,142	2,947,205	2,797,212	2,632,646	2,452,608	2,235,583	2,081,176
Illinois	875,520	818,886	793,745	757,508	726,917	697,565	646,927	602,558
Indiana	390,670	375,719	335,227	302,811	282,982	262,508	240,696	227,266
Michigan	808,117	774,005	730,019	699,957	650,400	601,189	527,407	487,192
Ohio	655,533	641,550	621,390	592,744	553,239	503,725	457,189	427,345
Wisconsin	485,560	472,982	466,824	444,192	419,108	387,621	363,364	336,815
West North Central	1,519,016	1,476,034	1,400,692	1,341,555	1,248,019	1,209,462	1,072,851	964,779
Iowa	332,402	322,769	315,560	298,745	268,721	259,437	232,472	209,394
Kansas	181,775	181,496	168,880	154,103	139,012	124,174	114,651	107,856
Minnesota	341,179	336,524	317,865	332,033	317,026	331,471	292,046	258,614
Missouri	409,658	397,192	374,610	344,566	321,255	305,780	285,003	255,009
Nebraska	156,713	157,044	146,388	135,737	131,038	123,711	104,371	93,506
North Dakota	71,849	59,617	55,709	54,175	52,731	48,930	29,966	27,951
South Dakota	25,440	21,392	21,680	22,196	18,236	15,959	14,342	12,449
South Atlantic	4,220,327	4,095,069	3,828,452	3,621,454	3,375,462	3,197,688	2,961,161	2,729,665
Delaware	54,154	53,161	50,734	52,627	48,970	44,696	40,119	37,194
District of Columbia	201,445	181,461	151,694	145,218	133,524	118,398	112,146	111,325
Florida	596,102	604,103	521,516	488,551	428,372	438,054	433,413	385,556
Georgia	709,595	669,507	606,212	546,960	514,809	484,019	452,907	424,424
Maryland	1,212,215	1,180,966	1,149,653	1,147,121	1,112,586	1,066,228	963,446	913,748
North Carolina	725,688	686,609	658,384	604,581	551,349	501,841	441,860	419,848
South Carolina	217,881	220,088	196,822	178,174	163,839	151,204	137,269	120,137
Virginia	448,041	445,775	434,151	403,201	368,756	342,476	331,973	278,065
West Virginia	55,206	53,399	59,286	55,021	53,257	50,772	48,028	39,368
East South Central	932,312	883,136	851,267	787,043	728,947	695,133	651,712	586,227
Alabama	342,171	327,403	304,961	281,209	258,537	252,998	246,566	215,836
Kentucky	148,376	134,784	126,026	122,409	109,644	97,989	90,880	83,998
Mississippi	124,675	112,794	114,311	105,739	98,555	100,383	88,991	78,922
Tennessee	317,090	308,155	305,969	277,686	262,211	243,763	225,275	207,471
West South Central	2,115,715	2,064,932	1,993,649	1,889,238	1,751,210	1,658,979	1,510,855	1,351,292
Arkansas	93,107	87,799	80,577	74,011	60,657	55,081	48,861	43,676
Louisiana	307,839	318,534	272,614	255,171	243,614	235,726	207,509	180,032
Oklahoma	201,626	186,371	174,585	172,968	169,427	152,624	130,650	113,279
Texas	1,513,143	1,472,228	1,465,873	1,387,088	1,277,512	1,215,548	1,123,835	1,014,305
Mountain	1,468,644	1,459,758	1,324,612	1,231,771	1,192,476	1,085,661	998,476	885,912
Arizona	375,881	380,216	342,792	310,721	299,733	284,128	261,384	223,834
Colorado	406,582	394,065	367,527	331,081	304,943	260,587	249,958	226,555
Idaho	64,930	58,621	55,390	48,774	46,896	41,437	36,570	33,191
Montana	71,518	66,879	53,057	48,080	44,596	38,149	34,980	32,450
Nevada	84,970	86,902	79,121	79,124	71,425	66,742	53,750	45,555
New Mexico	213,691	230,393	191,546	186,750	181,971	170,139	151,927	136,189
Utah	210,519	202,212	196,715	194,685	212,731	201,470	187,076	164,828
Wyoming	40,553	40,470	38,464	32,556	30,181	23,009	22,831	23,310
Pacific	3,717,113	3,493,109	3,302,941	3,175,249	3,094,301	2,821,385	2,633,765	2,415,763
Alaska	71,381	72,216	76,093	66,796	67,881	67,432	65,571	56,701
California	2,791,208	2,597,919	2,465,183	2,380,979	2,343,653	2,146,736	2,007,884	1,850,229
Hawaii	73,302	78,429	70,079	73,961	80,258	78,166	76,525	70,733
Oregon	276,109	258,575	242,822	225,750	203,915	179,384	171,616	161,215
Washington	505,113	485,970	448,764	427,763	398,594	349,667	312,169	276,885
Outlying Areas	72,719	69,636	51,407	47,848	51,152	46,410	44,071	41,941

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-24. Federally financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989-96

[Dollars in thousands]

Division and State	1996	1995	1994	1993	1992	1991	1990	1989
Total	13,502,516	13,067,900	12,397,547	11,724,168	10,908,803	10,075,262	9,491,923	8,859,110
New England	1,250,630	1,234,054	1,197,093	1,172,157	1,095,668	1,030,659	981,113	944,086
Connecticut	233,933	227,915	222,569	220,562	205,900	197,120	190,388	187,212
Maine	16,211	15,789	11,386	8,959	8,975	10,062	9,046	8,288
Massachusetts	827,463	824,826	792,731	771,864	724,271	680,168	649,104	621,789
New Hampshire	62,987	60,131	66,794	67,727	60,382	52,833	44,590	41,816
Rhode Island	78,515	72,461	69,918	71,515	63,383	59,616	57,430	56,446
Vermont	31,521	32,932	33,695	31,530	32,757	30,860	30,555	28,535
Middle Atlantic	2,119,730	2,066,415	1,997,143	1,895,969	1,765,007	1,620,346	1,554,047	1,442,367
New Jersey	215,559	207,257	190,721	166,835	165,377	150,044	136,159	119,237
New York	1,109,586	1,104,714	1,087,727	1,052,171	984,040	918,063	902,794	854,137
Pennsylvania	794,585	754,444	718,695	676,963	615,590	552,239	515,094	468,993
East North Central	1,780,746	1,733,521	1,659,544	1,573,127	1,445,419	1,317,195	1,233,380	1,178,005
Illinois	502,140	469,181	452,241	424,745	394,505	361,461	352,786	338,082
Indiana	203,390	197,910	181,226	167,743	153,981	143,761	134,953	136,040
Michigan	426,382	420,747	400,670	377,278	339,328	309,592	276,078	263,506
Ohio	370,837	375,061	357,928	348,166	319,868	284,791	260,537	242,559
Wisconsin	277,997	270,622	267,479	255,195	237,737	217,590	209,026	197,818
West North Central	751,206	734,425	694,670	642,662	604,697	566,841	514,812	482,532
Iowa	161,262	163,620	157,643	145,006	133,612	123,858	113,268	103,360
Kansas	68,823	70,026	64,115	59,635	53,150	43,913	43,478	44,292
Minnesota	198,927	194,819	181,039	174,716	165,926	164,887	143,810	132,880
Missouri	223,980	212,750	201,985	190,959	180,743	165,099	152,398	139,677
Nebraska	51,427	54,746	52,380	38,023	38,600	40,597	34,169	36,761
North Dakota	35,659	27,841	27,537	25,223	24,572	21,570	20,815	19,396
South Dakota	11,128	10,623	9,971	9,100	8,094	6,917	6,874	6,166
South Atlantic	2,594,139	2,517,678	2,381,671	2,223,572	2,052,287	1,918,610	1,793,139	1,687,732
Delaware	29,509	27,352	26,250	26,170	21,629	20,053	17,588	17,083
District of Columbia	147,212	132,770	103,677	100,345	94,107	86,793	86,292	84,274
Florida	313,555	317,081	288,429	267,717	230,439	220,683	223,232	200,742
Georgia	335,123	306,745	287,139	273,079	256,701	238,664	218,498	210,248
Maryland	915,752	900,537	888,254	847,466	829,940	790,174	729,675	707,811
North Carolina	442,804	431,682	410,886	377,983	332,927	303,921	276,795	261,896
South Carolina	120,015	109,443	90,558	73,020	59,688	54,045	45,718	41,627
Virginia	259,135	261,604	251,316	226,130	198,493	183,798	172,435	146,712
West Virginia	31,034	30,464	35,162	31,662	28,363	20,479	22,906	17,339
East South Central	536,422	504,040	493,885	451,921	411,744	373,576	352,424	316,030
Alabama	213,713	189,847	177,323	161,331	142,520	132,063	130,208	119,693
Kentucky	64,756	59,811	58,080	55,698	47,095	38,386	38,249	32,963
Mississippi	62,497	62,585	61,265	54,715	54,512	52,853	43,724	35,747
Tennessee	195,456	191,797	197,217	180,177	167,617	150,274	140,243	127,627
West South Central	1,023,134	976,422	916,986	860,513	768,317	712,402	659,861	604,636
Arkansas	32,815	33,348	29,450	25,362	22,063	20,178	17,485	14,213
Louisiana	124,414	135,838	102,697	95,891	89,089	98,860	83,213	69,219
Oklahoma	72,817	59,504	59,053	56,475	46,486	42,806	37,020	33,067
Texas	793,088	747,732	725,786	682,785	610,679	550,558	522,143	488,137
Mountain	863,518	881,604	776,846	717,796	689,245	631,853	587,650	522,768
Arizona	199,889	210,475	182,009	149,803	143,240	131,627	122,259	105,367
Colorado	270,221	263,802	239,109	222,107	208,315	187,819	179,978	167,043
Idaho	18,535	19,710	18,075	17,026	17,343	15,681	14,361	12,585
Montana	29,258	27,382	24,413	21,399	18,467	13,801	12,520	11,552
Nevada	46,713	47,708	43,614	43,196	35,599	38,221	33,959	26,587
New Mexico	137,607	156,554	118,994	113,060	110,587	94,309	85,747	76,777
Utah	146,304	140,600	135,517	136,630	142,396	137,613	126,619	109,053
Wyoming	14,991	15,373	15,115	14,575	13,298	12,782	12,207	13,804
Pacific	2,540,781	2,380,398	2,250,169	2,160,711	2,047,316	1,878,405	1,791,084	1,656,836
Alaska	30,351	37,285	40,770	41,616	32,066	34,335	31,895	26,659
California	1,934,114	1,800,462	1,697,546	1,630,280	1,547,315	1,436,983	1,378,820	1,285,312
Hawaii	40,198	44,238	39,392	41,362	47,684	44,857	42,665	40,574
Oregon	174,616	158,076	145,737	134,956	124,198	108,849	107,466	99,141
Washington	361,502	340,327	326,724	312,497	296,053	253,381	230,237	205,150
Outlying Areas	42,210	39,353	29,540	25,740	29,103	25,375	24,413	24,118

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-25. State and local government-financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989-96

[Dollars in thousands]

Division and State	1996	1995	1994	1993	1992	1991	1990	1989
Total	1,688,524	1,638,410	1,508,643	1,522,643	1,461,895	1,449,515	1,299,660	1,202,659
New England	41,921	42,236	35,528	38,564	34,857	33,795	31,743	32,965
Connecticut	19,938	18,732	12,297	10,067	5,937	5,996	5,262	5,430
Maine	1,594	2,005	2,290	1,711	1,320	2,197	908	584
Massachusetts	13,060	13,240	12,325	15,462	14,461	13,090	14,080	18,529
New Hampshire	3,833	3,963	2,890	5,846	5,175	4,375	3,985	2,646
Rhode Island	972	1,842	3,154	2,812	5,434	5,278	5,119	3,276
Vermont	2,524	2,454	2,572	2,666	2,530	2,859	2,389	2,500
Middle Atlantic	158,951	172,611	144,989	132,109	135,242	145,383	152,006	146,090
New Jersey	42,815	39,535	39,167	36,361	41,882	43,361	46,278	45,150
New York	79,043	98,122	76,827	75,571	71,020	75,490	74,439	68,474
Pennsylvania	37,093	34,954	28,995	20,177	22,340	26,532	31,289	32,466
East North Central	215,173	209,266	194,939	219,459	228,566	232,924	199,653	192,219
Illinois	47,269	46,910	43,863	45,716	52,643	52,573	38,023	33,881
Indiana	23,733	22,463	19,823	20,552	20,271	20,347	19,449	18,911
Michigan	48,252	51,788	41,345	39,541	39,907	42,539	36,747	35,983
Ohio	53,826	45,556	48,287	45,240	49,628	53,079	46,349	48,072
Wisconsin	42,093	42,549	41,621	68,410	66,117	64,386	59,085	55,372
West North Central	217,021	208,298	196,057	194,472	174,054	179,472	155,629	134,798
Iowa	49,905	47,279	47,189	38,218	31,006	34,147	29,500	24,839
Kansas	40,456	39,353	35,147	36,640	30,467	28,967	25,523	24,159
Minnesota	47,842	49,543	45,786	49,861	49,720	53,614	47,437	42,542
Missouri	22,882	21,486	19,270	18,959	17,703	19,061	18,469	14,509
Nebraska	45,335	42,331	39,554	39,576	37,523	35,817	27,860	22,926
North Dakota	1,555	1,534	1,493	1,532	1,085	1,327	1,061	918
South Dakota	9,046	6,772	7,618	9,686	6,550	6,539	5,779	4,905
South Atlantic	352,242	343,363	333,258	307,176	297,188	308,287	289,755	262,378
Delaware	2,410	2,144	2,180	3,710	4,702	4,024	3,139	2,603
District of Columbia	1,446	814	1,459	1,038	1,428	463	465	480
Florida	33,214	41,466	41,240	31,641	31,775	36,736	33,305	25,655
Georgia	61,783	55,663	44,663	39,325	39,835	43,222	42,638	40,141
Maryland	83,958	78,893	88,595	93,252	82,288	81,956	72,022	64,063
North Carolina	102,636	97,647	90,891	74,041	69,901	71,990	64,923	61,259
South Carolina	20,887	17,899	15,304	16,057	15,480	16,858	17,384	17,421
Virginia	43,599	46,814	46,990	46,108	49,472	51,474	54,680	49,501
West Virginia	2,289	2,023	1,936	2,004	2,307	1,564	1,199	1,255
East South Central	82,190	75,753	66,600	86,280	80,426	87,202	83,683	77,310
Alabama	5,789	6,991	6,052	26,991	26,313	27,267	25,752	18,339
Kentucky	11,467	9,589	6,197	6,198	5,086	6,122	6,684	7,113
Mississippi	29,173	23,778	20,528	21,836	19,731	20,886	20,953	20,493
Tennessee	35,761	35,395	33,823	31,255	29,296	32,927	30,294	31,365
West South Central	301,198	278,503	266,003	268,325	245,199	228,737	193,867	181,811
Arkansas	25,616	23,779	22,892	23,666	15,441	13,958	11,826	12,186
Louisiana	72,566	72,001	65,431	64,306	64,885	62,167	43,700	40,758
Oklahoma	30,472	19,699	19,275	22,399	19,578	13,593	7,665	5,062
Texas	172,544	163,024	158,405	157,954	145,295	139,019	130,676	123,805
Mountain	112,331	106,045	72,504	81,483	76,216	75,017	72,077	70,675
Arizona	8,022	8,080	7,257	6,333	7,299	7,945	7,318	7,949
Colorado	28,049	22,122	8,745	18,026	15,471	12,905	11,637	10,679
Idaho	21,555	20,615	9,463	12,550	10,681	8,604	8,156	8,112
Montana	13,433	12,914	9,268	9,029	10,285	8,884	7,885	7,919
Nevada	3,538	6,460	4,570	4,361	3,109	2,608	3,200	2,682
New Mexico	16,842	17,298	14,573	13,998	13,845	15,467	14,776	14,612
Utah	17,124	15,431	14,808	13,075	12,874	16,756	17,049	17,183
Wyoming	3,768	3,125	3,820	4,111	2,652	1,848	2,056	1,539
Pacific	186,624	183,572	189,936	186,065	182,007	150,530	113,867	97,351
Alaska	5,842	5,607	4,625	3,012	3,680	1,926	2,205	2,101
California	112,782	107,103	119,649	112,499	111,297	84,205	52,133	43,568
Hawaii	24,738	26,789	25,204	27,099	26,775	27,321	27,487	24,759
Oregon	31,906	30,312	29,042	29,762	27,244	25,727	22,568	20,860
Washington	11,356	13,761	11,416	13,693	13,011	11,351	9,474	6,063
Outlying Areas	20,873	18,763	8,829	8,710	8,140	8,168	7,380	7,062

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-26. Industry-financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989-96

[Dollars in thousands]

Division and State	1996	1995	1994	1993	1992	1991	1990	1989
Total	1,548,331	1,454,608	1,390,941	1,330,912	1,255,054	1,185,459	1,110,516	978,663
New England	133,839	125,148	130,861	133,365	121,163	123,117	115,753	107,101
Connecticut	23,378	20,327	18,814	18,351	15,273	16,121	13,402	11,630
Maine	4,214	4,158	4,406	4,117	3,545	4,719	4,663	4,002
Massachusetts	95,090	89,409	95,623	98,270	90,422	90,390	86,122	78,727
New Hampshire	3,886	3,919	4,309	4,842	4,451	3,997	3,715	2,951
Rhode Island	2,040	1,868	2,831	3,212	3,135	3,709	4,378	6,305
Vermont	5,231	5,467	4,878	4,573	4,337	4,181	3,473	3,486
Middle Atlantic	241,593	240,538	233,340	225,488	221,727	204,994	194,769	178,759
New Jersey	23,703	25,861	30,042	26,115	25,977	19,502	17,326	16,428
New York	94,671	94,374	91,069	87,804	91,741	85,282	78,359	70,598
Pennsylvania	123,219	120,303	112,229	111,569	104,009	100,210	99,084	91,733
East North Central	225,284	200,208	190,735	181,149	169,055	169,656	162,037	147,578
Illinois	48,582	43,091	42,948	44,745	43,574	49,583	44,812	38,990
Indiana	35,539	34,542	31,873	22,535	21,165	19,726	18,165	18,419
Michigan	58,656	51,386	47,420	47,390	44,903	43,684	44,694	36,310
Ohio	64,207	54,316	49,197	47,781	40,665	37,948	37,385	37,591
Wisconsin	18,300	16,873	19,297	18,698	18,748	18,715	16,981	16,268
West North Central	108,069	105,639	98,372	90,000	85,539	81,592	78,235	69,373
Iowa	22,285	19,391	18,411	17,907	21,563	14,372	12,354	14,711
Kansas	12,131	11,434	7,861	7,527	8,302	7,292	7,613	5,187
Minnesota	23,726	23,427	23,726	21,524	17,529	19,270	18,086	12,389
Missouri	32,416	36,639	35,140	31,492	27,152	30,195	28,082	25,151
Nebraska	12,268	10,933	10,664	8,891	8,529	7,845	8,875	9,098
North Dakota	4,505	3,346	1,989	2,173	2,056	2,308	2,845	2,521
South Dakota	738	469	581	486	408	310	380	316
South Atlantic	318,786	305,176	283,964	279,409	257,011	241,677	213,514	179,092
Delaware	2,964	3,681	4,117	4,857	5,075	4,732	4,397	4,073
District of Columbia	14,448	13,297	11,804	10,313	8,113	7,279	8,017	7,924
Florida	32,717	36,382	37,516	40,565	35,077	35,690	28,440	20,660
Georgia	63,461	55,129	53,469	51,968	42,067	40,010	37,343	35,635
Maryland	57,855	55,180	44,913	47,719	44,211	39,915	42,640	35,603
North Carolina	85,694	74,086	65,899	69,950	63,625	55,079	43,372	41,375
South Carolina	10,678	19,364	18,990	14,242	19,061	15,903	12,931	7,906
Virginia	47,361	44,897	43,198	35,822	34,187	31,899	26,292	21,953
West Virginia	3,608	3,160	4,058	3,973	5,595	11,170	10,082	3,963
East South Central	77,337	71,065	65,446	62,871	57,070	52,168	45,847	39,564
Alabama	29,706	29,164	25,170	23,729	21,620	20,348	18,662	16,242
Kentucky	19,686	16,627	15,970	13,575	12,800	10,569	8,123	7,516
Mississippi	11,122	8,929	8,885	9,824	9,141	8,892	8,314	5,439
Tennessee	16,823	16,345	15,421	15,743	13,509	12,359	10,748	10,367
West South Central	153,424	141,725	134,255	123,149	117,231	108,715	96,387	81,558
Arkansas	8,207	7,693	7,763	6,767	5,381	4,514	4,064	4,123
Louisiana	23,526	21,413	19,715	16,508	17,757	15,678	10,168	8,193
Oklahoma	11,804	11,453	10,958	10,320	10,170	8,559	6,872	5,667
Texas	109,887	101,166	95,819	89,554	83,923	79,964	75,283	63,575
Mountain	90,023	86,099	96,006	88,619	91,969	79,189	78,150	62,089
Arizona	17,099	23,238	21,746	18,889	19,130	19,519	18,066	12,500
Colorado	23,695	20,605	30,340	23,651	21,637	16,481	15,992	14,381
Idaho	9,957	7,408	10,041	7,286	5,147	5,050	4,206	4,199
Montana	7,000	5,825	3,965	3,234	3,230	4,406	4,266	3,242
Nevada	8,042	6,941	7,054	5,245	5,992	5,323	4,733	4,296
New Mexico	11,840	10,696	13,611	18,743	22,460	19,530	21,509	16,433
Utah	10,304	9,456	8,064	9,303	11,532	6,880	7,377	5,503
Wyoming	2,086	1,930	1,185	2,268	2,841	2,000	2,001	1,535
Pacific	197,682	177,062	156,721	146,357	133,273	123,674	125,508	113,327
Alaska	9,965	5,470	4,441	4,751	3,275	1,547	4,100	3,039
California	139,315	120,171	105,824	99,371	94,024	86,314	88,742	83,239
Hawaii	453	299	434	151	337	856	1,585	799
Oregon	8,620	11,693	9,672	8,578	6,736	6,850	6,343	4,857
Washington	39,329	39,429	36,350	33,506	28,901	28,107	24,738	21,393
Outlying Areas	2,294	1,948	1,241	505	1,016	677	316	222

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-27. Institutionally financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989-96

[Dollars in thousands]

Division and State	1996	1995	1994	1993	1992	1991	1990	1989
Total	4,124,310	3,980,006	3,765,808	3,534,965	3,509,593	3,333,423	2,977,522	2,672,272
New England	282,470	223,729	235,575	225,882	215,642	188,447	162,105	148,711
Connecticut	78,954	78,243	79,487	80,829	79,429	73,778	68,927	56,999
Maine	12,172	9,357	10,907	9,674	8,892	9,504	8,253	6,567
Massachusetts	142,051	92,116	96,861	91,877	86,110	71,025	53,644	58,681
New Hampshire	15,024	12,948	16,859	11,768	11,421	10,225	11,500	9,333
Rhode Island	23,609	21,546	23,965	23,481	22,345	17,520	13,237	11,646
Vermont	10,660	9,519	7,496	8,253	7,445	6,395	6,544	5,485
Middle Atlantic	538,245	513,254	476,002	445,820	461,405	446,646	407,055	363,266
New Jersey	141,824	133,955	116,838	116,307	119,163	114,157	103,882	82,798
New York	228,373	215,003	201,080	180,217	183,967	190,624	177,199	170,970
Pennsylvania	168,048	164,296	158,084	149,296	158,275	141,865	125,974	109,498
East North Central	731,670	688,766	637,624	559,002	537,691	517,977	451,668	415,859
Illinois	210,915	194,975	185,036	178,026	171,466	177,424	161,984	150,694
Indiana	108,210	101,283	83,841	65,991	64,601	61,425	52,059	43,658
Michigan	198,414	192,604	179,925	172,114	163,068	152,841	128,581	116,135
Ohio	120,413	107,789	103,365	89,146	83,800	73,765	61,520	62,068
Wisconsin	93,718	92,115	85,457	53,725	54,756	52,522	47,524	43,304
West North Central	348,938	342,439	331,589	330,605	308,328	301,243	252,727	220,024
Iowa	80,221	77,793	77,371	80,919	71,144	74,471	67,626	60,863
Kansas	52,546	52,517	53,884	44,215	42,537	39,897	33,491	30,204
Minnesota	46,739	46,235	46,531	64,840	61,532	60,904	53,399	43,713
Missouri	95,137	92,974	87,905	78,490	69,361	67,335	63,364	59,615
Nebraska	43,291	45,536	40,058	36,406	38,051	34,780	29,856	20,676
North Dakota	27,980	25,043	23,224	23,595	23,417	22,336	4,019	4,113
South Dakota	3,024	2,341	2,616	2,140	2,286	1,520	972	840
South Atlantic	735,857	729,956	644,444	645,170	614,398	585,533	535,562	491,589
Delaware	13,074	14,560	13,946	13,937	14,522	12,724	11,751	11,125
District of Columbia	21,321	19,937	19,322	18,346	15,871	12,718	10,539	13,022
Florida	184,422	180,109	123,158	119,937	108,535	116,339	122,097	112,906
Georgia	222,529	227,244	200,733	167,509	161,049	149,645	143,645	126,231
Maryland	99,341	94,407	86,709	125,118	123,249	122,290	89,568	81,790
North Carolina	64,095	61,857	63,465	63,862	65,197	51,758	40,761	41,222
South Carolina	48,596	53,994	54,049	52,850	51,932	54,011	50,859	44,864
Virginia	68,029	64,378	68,421	69,479	61,868	52,857	54,213	45,348
West Virginia	14,450	13,470	14,641	14,132	12,175	13,191	12,129	15,081
East South Central	188,327	180,071	172,309	135,481	135,311	137,579	126,130	113,590
Alabama	77,329	79,861	78,018	48,358	48,532	52,667	52,253	45,106
Kentucky	49,194	43,883	40,965	42,013	39,870	38,008	33,258	30,593
Mississippi	11,600	11,211	12,414	10,960	9,485	12,132	9,488	9,670
Tennessee	50,204	45,116	40,912	34,150	37,424	34,772	31,131	28,221
West South Central	411,718	461,608	466,978	436,186	418,473	415,244	391,329	326,841
Arkansas	21,184	19,717	17,228	14,774	14,321	12,945	12,451	9,521
Louisiana	69,492	69,785	66,688	61,267	51,397	44,184	55,010	47,129
Oklahoma	72,669	79,107	68,401	67,338	76,907	74,265	70,398	60,063
Texas	248,373	292,999	314,661	292,807	275,848	283,850	253,470	210,128
Mountain	335,524	316,861	299,709	271,634	271,936	242,979	205,554	183,797
Arizona	137,834	126,380	113,476	112,596	110,306	109,028	98,210	86,076
Colorado	50,997	52,080	54,001	41,797	36,675	23,078	22,465	17,735
Idaho	14,436	9,350	17,219	11,068	13,232	11,697	9,596	8,148
Montana	21,133	20,172	14,902	14,011	11,545	10,820	10,147	9,534
Nevada	25,924	24,798	22,603	25,193	25,553	19,675	10,172	10,396
New Mexico	39,092	38,562	30,561	28,507	25,388	28,762	19,399	17,860
Utah	27,828	28,065	30,278	27,825	38,330	33,779	29,237	27,822
Wyoming	18,280	17,454	16,669	10,637	10,907	6,140	6,328	6,226
Pacific	544,876	514,902	491,060	474,868	535,509	487,527	435,384	399,998
Alaska	25,217	23,850	26,253	17,412	27,205	28,246	23,636	21,869
California	399,131	372,649	364,732	367,837	427,386	389,142	351,678	321,600
Hawaii	3,186	3,738	3,290	3,109	3,319	3,391	3,568	3,686
Oregon	40,769	37,453	37,826	34,209	30,184	21,519	19,074	16,717
Washington	76,573	77,212	58,959	52,301	47,415	45,229	37,428	36,126
Outlying Areas	6,685	8,420	10,518	10,317	10,900	10,248	10,008	8,597

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-28. All other sources of financed R&D expenditures at doctorate-granting institutions, by geographic division and State: fiscal years 1989-96

[Dollars in thousands]

Division and State	1996	1995	1994	1993	1992	1991	1990	1989
Total	1,617,112	1,589,668	1,550,238	1,464,092	1,390,264	1,290,257	1,177,758	1,057,549
New England	147,841	177,655	185,653	177,918	156,613	139,671	131,881	123,758
Connecticut	31,931	32,008	33,781	34,899	33,135	27,920	24,680	23,139
Maine	493	592	404	418	481	600	735	533
Massachusetts	96,656	127,559	135,654	128,318	112,331	99,035	85,854	89,795
New Hampshire	12,908	12,112	10,700	9,292	5,983	7,545	5,941	5,426
Rhode Island	2,130	1,691	1,980	2,174	2,210	2,325	2,470	2,128
Vermont	3,723	3,693	3,134	2,817	2,473	2,246	2,201	2,737
Middle Atlantic	304,327	310,136	276,768	238,138	244,072	233,532	218,433	226,395
New Jersey	29,016	33,434	29,251	28,198	26,705	25,246	24,591	20,284
New York	208,510	211,168	187,574	148,939	149,624	150,306	135,609	147,464
Pennsylvania	66,801	65,534	59,943	61,001	67,743	57,980	58,233	58,647
East North Central	262,527	251,381	264,363	264,475	251,915	214,856	188,845	147,515
Illinois	66,614	64,729	69,657	64,276	64,729	56,524	49,322	40,911
Indiana	19,798	19,521	18,464	25,990	22,964	17,249	16,070	10,238
Michigan	76,413	57,480	60,659	63,634	63,194	52,533	41,307	35,258
Ohio	46,250	58,828	62,613	62,411	59,278	54,142	51,398	37,055
Wisconsin	53,452	50,823	52,970	48,164	41,750	34,408	30,748	24,053
West North Central	93,782	85,233	80,004	83,816	75,401	80,314	71,448	58,052
Iowa	18,729	14,686	14,946	16,695	11,396	12,589	9,724	5,621
Kansas	7,819	8,166	7,873	6,086	4,556	4,105	4,546	4,014
Minnesota	23,945	22,500	20,783	21,092	22,319	32,796	29,314	27,090
Missouri	35,243	33,343	30,310	24,666	26,296	24,090	22,690	16,057
Nebraska	4,392	3,498	3,732	12,841	8,335	4,672	3,611	4,045
North Dakota	2,150	1,853	1,466	1,652	1,601	1,389	1,226	1,003
South Dakota	1,504	1,187	894	784	898	673	337	222
South Atlantic	219,303	198,896	185,115	166,127	154,578	143,581	129,191	108,874
Delaware	6,197	5,424	4,241	3,953	3,042	3,163	3,244	2,310
District of Columbia	17,018	14,643	15,432	15,176	14,005	11,145	6,833	5,625
Florida	32,174	29,065	31,173	28,691	22,546	28,606	26,339	25,593
Georgia	26,699	24,726	20,208	15,079	15,157	12,478	10,783	12,169
Maryland	55,309	51,949	41,182	33,566	32,898	31,893	29,541	24,481
North Carolina	30,459	21,337	27,243	18,745	19,699	19,093	16,009	14,096
South Carolina	17,705	19,388	17,921	22,005	17,678	10,387	10,377	8,319
Virginia	29,917	28,082	24,226	25,662	24,736	22,448	24,353	14,551
West Virginia	3,825	4,282	3,489	3,250	4,817	4,368	1,712	1,730
East South Central	48,036	52,207	53,027	50,490	44,396	44,608	43,628	39,733
Alabama	15,634	21,540	18,398	20,800	19,552	20,653	19,691	16,456
Kentucky	3,273	4,874	4,814	4,925	4,793	4,904	4,566	5,813
Mississippi	10,283	6,291	11,219	8,404	5,686	5,620	6,512	7,573
Tennessee	18,846	19,502	18,596	16,361	14,365	13,431	12,859	9,891
West South Central	226,241	206,674	209,427	201,065	201,990	193,881	169,411	156,446
Arkansas	5,285	3,262	3,244	3,442	3,451	3,486	3,035	3,633
Louisiana	17,841	19,497	18,083	17,199	20,486	14,837	15,418	14,733
Oklahoma	13,864	16,608	16,898	16,436	16,286	13,401	8,695	9,420
Texas	189,251	167,307	171,202	163,988	161,767	162,157	142,263	128,660
Mountain	67,248	69,149	79,547	72,239	63,110	56,623	55,045	46,583
Arizona	13,037	12,043	18,304	23,100	19,758	16,009	15,531	11,942
Colorado	33,620	35,456	35,332	25,500	22,845	20,304	19,886	16,717
Idaho	447	1,538	592	844	493	405	251	147
Montana	694	586	509	407	1,069	238	162	203
Nevada	753	995	1,280	1,129	1,172	915	1,686	1,594
New Mexico	8,310	7,283	13,807	12,442	9,691	12,071	10,496	10,507
Utah	8,959	8,660	8,048	7,852	7,599	6,442	6,794	5,267
Wyoming	1,428	2,588	1,675	965	483	239	239	206
Pacific	247,150	237,185	215,055	207,248	196,196	181,249	167,922	148,251
Alaska	6	4	4	5	1,655	1,378	3,734	3,033
California	205,866	197,534	177,432	170,992	163,631	150,092	136,511	116,510
Hawaii	4,727	3,365	1,759	2,240	2,143	1,741	1,220	915
Oregon	20,198	21,041	20,545	18,245	15,553	16,439	16,165	19,640
Washington	16,353	15,241	15,315	15,766	13,214	11,599	10,292	8,153
Outlying Areas	657	1,152	1,279	2,576	1,993	1,942	1,954	1,942

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
United States, total	22,480,793	13,502,516	1,688,524	1,548,331	4,124,310	1,617,112
Public, total	15,130,558	8,190,192	1,530,144	1,041,973	3,394,914	973,335
Private, total	7,350,235	5,312,324	158,380	506,358	729,396	643,777
Alabama, total	342,171	213,713	5,789	29,706	77,329	15,634
Public, total	342,171	213,713	5,789	29,706	77,329	15,634
Alabama A&M University	9,765i	8,382i	0i	0i	1,383i	0i
Auburn University	87,358	31,401	634	4,212	46,819	4,292
The University of Alabama	21,806	12,238	917	1,407	7,244	0
U of Alabama Birmingham	170,193	125,804	2,205	17,354	13,488	11,342
U of Alabama Huntsville	38,176	26,141	1,211	4,752	6,072	0
U of South Alabama	14,873	9,747	822	1,981	2,323	0
Alaska, total	71,381	30,351	5,842	9,965	25,217	6
Public, total	71,381	30,351	5,842	9,965	25,217	6
U of Alaska Fairbanks	71,381	30,351	5,842	9,965	25,217	6
Arizona, total	375,881	199,889	8,022	17,099	137,834	13,037
Public, total	375,881	199,889	8,022	17,099	137,834	13,037
Arizona State University	84,653	38,947	1,136	2,758	39,180	2,632
Northern Arizona U	11,572	6,938	1,050	1,235	2,349	0
University of Arizona	279,656	154,004	5,836	13,106	96,305	10,405
Arkansas, total	93,107	32,815	25,616	8,207	21,184	5,285
Public, total	93,107	32,815	25,616	8,207	21,184	5,285
U Arkansas Main	59,753	16,019	25,330	4,474	11,995	1,935
U Arkansas Medical Sci	33,354	16,796	286	3,733	9,189	3,350
California, total	2,791,208	1,934,114	112,782	139,315	399,131	205,866
Public, total	2,031,073	1,306,690	105,473	89,969	346,656	182,285
CA St U Long Beach	5,843	5,013	170	611	0	49
San Diego St University	43,201	17,181	10,761	725	11,441	3,093
U CA Berkeley	316,320	168,171	37,004	15,128	72,549	23,468
U CA Davis	254,604	130,188	16,354	9,387	79,386	19,289
U CA Irvine	119,647	72,994	5,519	10,391	17,560	13,183
U CA Los Angeles	354,645	236,635	7,269	15,788	52,264	42,689
U CA Riverside	71,495	27,727	3,970	1,702	33,587	4,509
U CA San Diego	371,509	291,917	9,285	15,130	28,003	27,174
U CA San Francisco	320,757	221,864	11,771	16,989	31,265	38,868
U CA Santa Barbara	91,284	73,400	1,832	2,988	8,457	4,607
U CA Santa Cruz	51,062	31,727	1,268	1,032	12,144	4,891
U CA, Office of the Pres	0	0	0	0	0	0
US Naval Postgrad School	30,706	29,873	270	98	0	465
Private, total	760,135	627,424	7,309	49,346	52,475	23,581
Biola University*	0	0	0	0	0	0
C R Drew U of Med & Sci	16,386	15,288	0	1,098	0	0
CA Inst of Integral Stu	0	0	0	0	0	0
CA Sch Prof Psy Brk Alm	133	20	101	0	12	0
CA Sch Prof Psy Fresno	1,570	895	0	0	175	500
CA Sch Prof Psy L A	225e	0i	0i	0i	156i	69i
CA Sch Prof Psy S Diego	517	99	110	0	308	0
California Inst of Tech	157,005	142,474	927	4,447	7,085	2,072
Claremont Graduate Sch	1,100	256	169	1	181	493
Fuller Theological Sem	11	0	0	7	4	0
Golden Gate University	0	0	0	0	0	0
Loma Linda University	10,837	5,878	0	3,273	1,686	0
Pepperdine University	0	0	0	0	0	0
Santa Clara University	1,954i	450i	0i	487i	960i	57i
Stanford University	324,821	281,641	777	18,387	3,657	20,359
U of Southern California	244,258	179,281	5,154	21,592	38,231	0
US International U	0	0	0	0	0	0
University of San Diego	252	167	0	54	0	31
University of the Pacific	860	860	0	0	0	0

See explanatory information and SOURCE at end of table

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
California, continued:						
Private, continued:						
Western U of Hlth Sci	206	115	71	0	20	0
Colorado, total	406,582	270,221	28,049	23,695	50,997	33,620
Public, total	397,854	262,451	28,011	23,384	50,889	33,119
Colorado School of Mines	19,291	9,534	732	8,114	911	0
Colorado State University	126,701	74,930	21,979	6,320	22,976	496
U of Northern Colorado	561	470	5	48	38	0
University of Colorado	251,301	177,517	5,295	8,902	26,964	32,623
Private, total	8,728	7,770	38	311	108	501
University of Denver	8,728	7,770	38	311	108	501
Connecticut, total	388,134	233,933	19,938	23,378	78,954	31,931
Public, total	147,522	53,009	16,653	8,026	61,755	8,079
University of Connecticut	147,522	53,009	16,653	8,026	61,755	8,079
Private, total	240,612	180,924	3,285	15,352	17,199	23,852
University of Hartford	466	41	0	0	359	66
Wesleyan University	5,245	3,889	90	30	810	426
Yale University	234,901	176,994	3,195	15,322	16,030	23,360
Delaware, total	54,154	29,509	2,410	2,964	13,074	6,197
Public, total	54,154	29,509	2,410	2,964	13,074	6,197
University of Delaware	54,154	29,509	2,410	2,964	13,074	6,197
District of Columbia, total	201,445	147,212	1,446	14,448	21,321	17,018
Private, total	201,445	147,212	1,446	14,448	21,321	17,018
American University	3,279	2,864	41	17	206	151
Catholic U of America	7,427	5,901	112	933	0	481
George Washington U	49,263	30,490	359	5,704	5,039	7,671
Georgetown University	112,582	81,704	209	6,737	15,235	8,697
Howard University	28,894	26,253	725	1,057	841	18
Florida, total	596,102	313,555	33,234	32,717	184,422	32,174
Public, total	456,775	212,998	29,801	17,889	176,655	19,432
Florida A&M University	22,474	20,118	2,356	0	0	0
Florida Atlantic U	10,576	6,500	2,300	1,776	0	0
Florida International U	16,856	13,415	1,389	527	1,111	414
Florida State University	78,125	39,527	2,460	1,565	30,186	4,387
U of Central Florida	21,488	18,714	814	1,207	753	0
U of South Florida	94,157	29,751	8,511	3,282	46,520	6,093
University of Florida	213,099	84,973	11,971	9,532	98,085	8,538
Private, total	139,327	100,557	3,433	14,828	7,767	12,742
Florida Inst of Tech	8,013	2,980	1,707	2,354	276	696
Nova Southeastern U	1,258	861	210	153	34	0
University of Miami	130,056	96,716	1,516	12,321	7,457	12,046
Georgia, total	709,595	335,123	61,783	63,461	222,529	26,699
Public, total	489,075	189,565	53,995	52,661	189,587	3,267
Georgia Institute of Tech	225,633	116,155	6,818	39,136	63,524	0
Georgia State University	18,114	5,818	1,888	669	8,607	1,132
Medical Col of Georgia	35,971	11,338	3,128	2,995	17,208	1,302
University of Georgia	209,357	56,254	42,161	9,861	100,248	833
Private, total	220,520	145,558	7,788	10,800	32,942	23,432
Clark Atlanta University	34,566	25,345	2,000	790	6,431	0
Emory University	149,168	95,237	5,396	6,383	19,717	22,435
Inst Paper Sci and Tech	9,939	2,397	303	1,276	5,352	611

See explanatory information and SOURCE at end of table

60

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Georgia, continued:						
Private, continued:						
Mercer University	13,641	10,832	89	1,651	1,069	0
Morehouse School of Med	13,206	11,747	0	700	373	386
Hawaii, total	73,302	40,198	24,738	453	3,186	4,727
Public, total	73,302	40,198	24,738	453	3,186	4,727
Univ of Hawaii Manoa	73,302	40,198	24,738	453	3,186	4,727
Idaho, total	64,930	18,535	21,555	9,957	14,436	447
Public, total	64,930	18,535	21,555	9,957	14,436	447
Idaho State University	8,732	2,054	1,921	3,479	1,278	0
University of Idaho	56,198	16,481	19,634	6,478	13,158	447
Illinois, total	875,520	502,140	47,269	48,582	210,915	66,614
Public, total	433,408	218,949	41,183	23,366	123,687	26,223
Illinois State University	4,608	2,110	1,699	0	38	761
Northern Illinois U	11,674	4,809	545	2,222	4,098	0
Sthrn IL U Carbondale	28,578	8,836	5,898	2,033	9,227	2,584
U of Illinois Urbana	267,008	144,203	30,929	12,365	67,016	12,495
University of IL Chicago	121,540	58,991	2,112	6,746	43,308	10,383
Private, total	442,112	283,191	6,086	25,216	87,228	40,391
DePaul University	1,300	842	125	163	170	0
Finch U Hlth Sci Chicago	7,022	5,209	0	137	877	799
Illinois Inst of Tech	16,000	11,183	120	4,000	697	0
Loyola U of Chicago	42,565	27,931	797	4,271	5,372	4,194
Midwestern University	1,512	613	0	89	760	50
Northwestern University	187,262	100,810	3,396	9,378	54,473	19,205
Rush University	48,772	22,480	140	5,872	17,201	3,079
University of Chicago	137,679	114,123	1,508	1,306	7,678	13,064
Indiana, total	390,670	203,390	23,733	35,539	108,210	19,798
Public, total	366,114	184,504	23,656	32,028	106,128	19,798
Ball State University	2,667	1,459	0	474	734	0
Indiana State University	1,548	532	355	477	0	184
Indiana University	154,948	90,881	2,935	5,357	36,615	19,160
Purdue University	206,951	91,632	20,366	25,720	68,779	454
Private, total	24,556	18,886	77	3,511	2,082	0
University of Notre Dame	24,556	18,886	77	3,511	2,082	0
Iowa, total	332,402	161,262	49,905	22,285	80,221	18,729
Public, total	332,086	161,262	49,905	22,285	79,953	18,681
Iowa State University	151,914	54,904	43,716	7,407	40,843	5,044
U of Iowa	178,228	105,646	5,740	14,862	38,525	13,455
U of Northern Iowa	1,944	712	449	16	585	182
Private, total	316	0	0	0	268	48
Maharishi U of Mgmt	0	0	0	0	0	0
U Osteo Med & Hlth Sci	316	0	0	0	268	48
Kansas, total	181,775	68,823	40,456	12,131	52,546	7,819
Public, total	181,775	68,823	40,456	12,131	52,546	7,819
Kansas State University	71,222	24,769	29,835	2,243	12,275	2,100
University of Kansas	100,649	41,858	7,621	9,356	36,473	5,341
Wichita State University	9,904	2,196	3,000	532	3,798	378

See explanatory information and SOURCE at end of table.

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Kentucky, total	148,376	64,756	11,467	19,686	49,194	3,273
Public, total	148,376	64,756	11,467	19,686	49,194	3,273
University of Kentucky	118,721	51,450	11,397	13,374	39,227	3,273
University of Louisville	29,655	13,306	70	6,312	9,967	0
Private, total	0	0	0	0	0	0
Spalding University	0	0	0	0	0	0
Louisiana, total	307,839	124,414	72,566	23,526	69,492	17,841
Public, total	218,991	69,588	70,227	12,218	53,060	13,898
Louisiana St U, All Camp	196,328	64,524	65,425	11,298	42,125	12,956
Louisiana Tech University	3,100	555 i	1,000 i	920 i	625 i	0 i
Northeast Louisiana U	6,134	1,573	1,288	0	3,273	0
U of Southwestern LA	13,429	2,936	2,514	0	7,037	942
Private, total	88,848	54,826	2,339	11,308	16,432	3,943
Tulane University	83,660	49,720	2,293	11,276	16,432	3,939
Xavier University of LA	5,188	5,106	46	32	0	4
Maine, total	34,684	16,211	1,594	4,214	12,172	493
Public, total	34,684	16,211	1,594	4,214	12,172	493
U of Maine	34,684	16,211	1,594	4,214	12,172	493
Maryland, total	1,212,215	915,752	83,958	57,855	99,341	55,309
Public, total	413,747	295,633	81,636	45,467	68,673	12,338
U MD Baltimore County	14,304	8,135	4,366	1,803	0	0
U MD Center for EES	21,448	5,998	2,943	170	10,177	2,160
U MD College Park	216,957	99,688	57,081	24,044	36,144	0
U MD Eastern Shore	1,980	1,980	0	0	0	0
U of MD Baltimore	122,207	65,211	17,246	19,450	10,122	10,178
Unif Svcs U of Hlth Sci	36,851	24,621	0	0	12,230	0
Private, total	798,468	710,119	2,322	12,388	30,668	42,971
Johns Hopkins Univ	798,468	710,119	2,322	12,388	30,668	42,971
Massachusetts, total	1,174,320	827,463	13,060	95,090	142,051	96,656
Public, total	165,751	91,130	8,976	12,663	40,530	12,452
U MA Amherst	73,678	37,969	5,933	5,738	17,503	6,535
U MA Boston	10,898	2,706	2,405	0	3,691	2,096
U MA Lowell	17,834	10,257	638	5,779	1,160	0
U MA Worcester	63,341	40,198	0	1,146	18,176	3,821
Private, total	1,008,569	736,333	4,084	82,427	101,521	84,204
Boston College	14,504	11,137	40	280	2,365	682
Boston University	110,267	87,947	509	8,726	0	13,085
Brandeis University	36,760	23,233	200	0	4,142	9,185
Clark University	1,954	1,756	20	22	0	156
Harvard University	282,443	203,047	48	2,137	60,239	16,972
MA Col Phar Allied Hlth	205	0	0	205	0	0
MA Institute of Tech	380,612	271,544	1,652	62,699	16,718	27,999
Northeastern University	17,980	14,706	546	2,072	656	0
Smith College	2,066 i	668 i	0 i	0 i	524 i	874 i
Tufts University	79,356	53,508	626	4,970	13,666	6,586
Woods Hole Oceanograph	73,015	61,820	336	697	1,764	8,398
Worcester Polytech Inst	9,407	6,967	107	619	1,447	267
Michigan, total	808,117	426,382	48,252	58,656	198,414	76,413
Public, total	805,196	425,180	48,252	57,063	198,317	76,384
Central Michigan U	1,043	213	378	200	127	125
Michigan State University	182,589	77,243	31,362	6,818	54,099	13,067
Michigan Tech University	23,882	13,978	1,232	3,749	4,923	0
Oakland University	6,832	3,222	462	1,068	1,787	293

See explanatory information and SOURCE at end of table.

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Michigan, continued:						
Public, continued:						
University of Michigan	468,876	281,062	1,669	34,975	99,971	51,199
Wayne State University	112,151	46,264	11,569	8,977	34,784	10,557
Western Michigan U	9,823	3,198	1,580	1,276	2,626	1,143
Private, total	2,921	1,202	0	1,593	97	29
Andrews University	366	252	0	3	82	29
U of Detroit Mercy	2,555	950	0	1,590	15	0
Minnesota, total	341,179	198,927	47,842	23,726	46,739	23,945
Public, total	341,179	198,927	47,842	23,726	46,739	23,945
University of Minnesota	341,179	198,927	47,842	23,726	46,739	23,945
Mississippi, total	124,675	62,497	29,173	11,122	11,600	10,283
Public, total	124,675	62,497	29,173	11,122	11,600	10,283
Jackson State University	5,224	4,702	0	522	0	0
Mississippi State U	84,124	34,637	25,660	7,599	7,272	8,956
U Mississippi, All Camp	26,215	15,571	3,388	1,920	4,009	1,327
U Southern Mississippi	9,112	7,587	125	1,081	319	0
Missouri, total	409,658	223,980	22,882	32,416	95,137	35,243
Public, total	164,490	46,638	17,873	11,176	77,269	11,534
U of Missouri Columbia	123,133	33,397	16,201	8,164	57,357	8,014
U of Missouri Kansas City	12,803	4,851	694	622	6,202	434
U of Missouri Rolla	20,652	5,587	487	2,036	9,879	2,663
U of Missouri St Louis	7,706	2,803	356	354	3,770	423
U of Missouri Sys Admn	196	0	135	0	61	0
Private, total	245,168	177,342	5,009	21,240	17,868	23,709
Forest Inst of Prof Psy	5	0	0	0	0	5
Kirksville Col Osteo Med	747	482	0	0	99	166
Saint Louis University	25,099	21,483	243	2,483	743	147
U of Health Sci (MO)	677	180	60	57	0	380
Washington University	218,640	155,197	4,706	18,700	17,026	23,011
Montana, total	71,518	29,258	13,433	7,000	21,133	694
Public, total	71,518	29,258	13,433	7,000	21,133	694
Montana St U Bozeman	50,097	17,667	12,163	5,489	14,778	0
The University of Montana	21,421	11,591	1,270	1,511	6,355	694
Nebraska, total	156,713	51,427	45,335	12,268	43,291	4,392
Public, total	145,072	46,381	43,690	7,751	42,948	4,302
U of NE Med Ctr Omaha	42,612	14,029	6,939	4,286	14,739	2,619
U of Nebraska Lincoln	102,460	32,352	36,751	3,465	28,209	1,683
Private, total	11,641	5,046	1,645	4,517	343	90
Creighton University	11,641	5,046	1,645	4,517	343	90
Nevada, total	84,970	46,713	3,538	8,042	25,924	753
Public, total	84,970	46,713	3,538	8,042	25,924	753
Desert Research Institute	20,100	14,600	300	5,200	0	0
U of Nevada Las Vegas	16,893	11,142	2,055	1,443	2,253	0
U of Nevada Reno	47,977	20,971	1,183	1,399	23,671	753

See explanatory information and SOURCE at end of table.

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
New Hampshire, total	98,638	62,987	3,833	3,886	15,024	12,908
Public, total	45,693	23,305	1,752	1,315	12,250	7,071
U of New Hampshire	45,693	23,305	1,752	1,315	12,250	7,071
Private, total	52,945	39,682	2,081	2,571	2,774	5,837
Dartmouth College	52,945	39,682	2,081	2,571	2,774	5,837
New Jersey, total	452,917	215,559	42,815	23,703	141,824	29,016
Public, total	322,748	135,654	40,651	17,133	110,989	18,321
NJ Inst of Technology	39,110	20,561	6,197	2,313	9,194	845
Rutgers the State U NJ	185,103	67,588	26,554	7,079	73,829	10,053
U Med & Dent NJ	98,535	47,505	7,900	7,741	27,966	7,423
Private, total	130,169	79,905	2,164	6,570	30,835	10,695
Fairleigh Dickinson U	140	54i	1i	0i	20i	65i
Princeton University	112,380	69,386	637	4,483	27,244	10,630
Seton Hall University	2,400e	1,243i	0i	0i	1,157i	0i
Stevens Inst of Tech	15,249	9,222	1,526	2,087	2,414	0
New Mexico, total	213,691	137,607	16,842	11,840	39,092	8,310
Public, total	213,691	137,607	16,842	11,840	39,092	8,310
NM Inst Mining & Tech	20,580	7,205	1,748	6,895	4,530	202
New Mexico State Univ	76,493	53,552	11,762	2,556	6,704	1,919
University of New Mexico	116,618	76,850	3,332	2,389	27,858	6,189
New York, total	1,720,183	1,109,586	79,043	94,671	228,373	208,510
Public, total	421,572	254,089	12,933	30,391	75,658	48,501
CUNY Grad Sch & U Ctr	2,925i	2,575i	4i	0i	37i	309i
CUNY H H Lehman Col	1,199	891	0	212	96	0
SUNY Albany	66,247	48,395	3,085	1,904	5,186	7,677
SUNY Binghamton	18,500	5,661	3,527	1,799	5,279	2,234
SUNY Buffalo	137,701	87,813	589	13,186	13,497	22,616
SUNY Col Env Sci Frstry	21,969	3,021	555	1,500	15,977	916
SUNY Col of Optometry	641	327	0	56	148	110
SUNY Hlth Sci Ctr Brklyn	31,920i	19,072i	72i	5,418i	4,475i	2,883i
SUNY Hlth Sci Ctr Syrcse	14,093	6,764	841	468	259	5,761
SUNY Stony Brook	126,377	79,570	4,260	5,848	30,704	5,995
Private, total	1,298,611	855,497	66,110	64,280	152,715	160,009
Adelphi University	317	221	0	80	2	14
Albany Medical College	7,888	6,691	0	0	575	622
Alfred University	4,217	600	1,114	1,755	581	167
CUNY Mt Sinai Sch Med	92,405	61,599	2,727	3,288	11,546	13,245
Clarkson University	8,264	3,794	862	1,779	1,829	0
Columbia University	236,403	195,652	2,852	2,559	10,200	25,140
Cornell University	339,534	203,082	36,916	14,915	46,676	37,945
Fordham University	2,712	1,421	110	0	227	954
Hofstra University	2,290	2,290	0	0	0	0
Long Island University	155	14	62	32	15	32
New Sch for Soci Res	4,718i	656i	0i	0i	0i	4,062i
New York Inst Technology	278	30	79	21	130	18
New York Medical College	16,372	11,657	206	1,532	0	2,977
New York University	145,874	90,010	1,610	10,461	18,514	25,279
Pace University All Cmp	0	0	0	0	0	0
Polytechnic University	10,964	6,329	556	2,857	1,093	129
Rensselaer Polytech Inst	37,917	24,748	2,476	6,210	3,747	736
Rochester Inst of Tech	8,118	2,545	351	1,246	3,976e	0
St John's University (NY)	1,903	1,227	0	509	167	0
Syracuse University	34,322	18,361	4,800	2,550	5,259	3,352
Teachers Col, Columbia U	1,005	262	485	0	0	258
The Rockefeller Univ	105,595	37,369	2,237	2,800	28,394	34,795e
Union College (NY)	1,016	610	154	81	79	92
University of Rochester	144,914	112,933	8,513	11,605	4,346	7,517

See explanatory information and SOURCE at end of table

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
New York, continued						
Private, continued						
Yeshiva University	91,430	73,396	0	0	15,359	2,675
North Carolina, total	725,688	442,804	102,636	85,694	64,095	30,459
Public, total	408,122	237,328	96,791	30,200	43,104	699
East Carolina University	6,817	4,079	1,297	1,441	0	0
NC State U Raleigh	190,748	74,485	70,474	26,067	19,135	587
U of NC Chapel Hill	208,529	157,034	24,934	2,592	23,969	0
U of NC Greensboro	2,028	1,730	86	100	0	112
Private, total	317,566	205,476	5,845	55,494	20,991	29,760
Duke University	242,235	149,631	5,425	42,797	17,887	26,495
Wake Forest University	75,331	55,845	420	12,697	3,104	3,265
North Dakota, total	71,849	35,659	1,555	4,505	27,980	2,150
Public, total	71,849	35,659	1,555	4,505	27,980	2,150
North Dakota State U	43,661	11,683	1,512	1,534	27,525	1,407
Univ of North Dakota	28,188	23,976	43	2,971	455	743
Ohio, total	655,533	370,837	53,826	64,207	120,413	46,250
Public, total	467,737	226,523	49,203	52,263	105,487	34,261
Air Force Inst of Tech	5,877	2,291	0	0	3,586	0
Bowling Green State U	3,942	2,436i	250i	141i	1,115i	0i
Cleveland State U	10,884i	3,588i	3,057i	1,291i	2,948i	0i
Kent State University	11,497	7,729	472	1,243	2,053	0
Med Col of Ohio Toledo	13,367	9,559	787	308	2,235	478
Miami University (OH)	8,847	2,633	592	698	4,830	94
N E. Ohio Univs Col Med	2,493	1,068	85	135	905	300
Ohio State University	262,147	118,811	37,391	30,870	51,357	23,718
Ohio University	18,329	8,046	1,236	2,322	6,446	279
University of Akron	15,507	4,793	1,698	3,313	4,699	1,004
University of Cincinnati	89,286	52,561	1,848	9,079	18,839	6,959
University of Toledo	8,180e	3,506e	589i	1,613i	1,691i	781i
Wright State University	17,381	9,502	1,198	1,250	4,783	648
Private, total	187,796	144,314	4,623	11,944	14,926	11,989
Antioch University	0	0	0	0	0	0
Case Western Reserve U	143,435	109,901	3,968	5,784	12,333	11,449
The Union Institute	1,173	0	0	0	824	349
University of Dayton	43,188	34,413	655	6,160	1,769	191
Oklahoma, total	201,626	72,817	30,472	11,804	72,669	13,864
Public, total	192,031	67,713	29,742	8,984	71,738	13,854
Oklahoma State University	82,960	25,034	15,356	2,334	37,915	2,321
University of Oklahoma	109,071	42,679	14,386	6,650	33,823	11,533
Private, total	9,595	5,104	730	2,820	931	10
Oral Roberts University	30	0	0	0	20	10
University of Tulsa	9,565	5,104	730	2,820	911	0
Oregon, total	276,109	174,616	31,906	8,620	40,769	20,198
Public, total	254,697	163,401	31,229	5,863	38,343	15,861
Oregon Health Sciences U	80,333	51,338	54	4,597	19,660	4,684
Oregon State University	131,334	79,977	29,177	728	12,982	8,470
Portland State University	9,376	5,675	1,478	197	1,729	297
University of Oregon	33,654	26,411	520	341	3,972	2,410
Private, total	21,412	11,215	677	2,757	2,426	4,337
Oregon Grad Inst Sci Tech	21,412	11,215	677	2,757	2,426	4,337
Pacific University	0	0	0	0	0	0

See explanatory information and SOURCE at end of table.

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Pennsylvania, total	1,189,746	794,585	37,093	123,219	168,048	66,801
Public, total	584,859	369,888	13,741	65,825	119,444	15,961
Indiana U of PA All Cmp	562	520	1	1	37	3
Pennsylvania State U	337,938	190,688	11,237	52,771	83,242	0
Temple University	56,533	28,720	583	5,173	19,699	2,358
University of Pittsburgh	189,826	149,960	1,920	7,880	16,466	13,600
Private, total	604,887	424,697	23,352	57,394	48,604	50,840
Allegheny U of Hlth Sci	48,790	27,723	4,131	5,060	9,247	2,629
Bryn Mawr College	3,432	1,039	26	82	2,285	0
Carnegie Mellon U	136,514	91,830	8,460	21,521	5,206	9,497
Drexel University	19,322	11,613	744	4,343	2,622	0
Duquesne University	861	618	11	105	36	91
Lehigh University	34,780	22,409	1,937	6,832	3,335	267
Phila Col Osteopathic Med	869	91	432	0	199	147
Phila Col of Phar & Sci	695	342	0	353	0	0
Thomas Jefferson U	69,154	51,475	54	9,553	68	8,004
U of Pennsylvania	288,430	216,167	7,267	9,445	25,346	30,205
Villanova University	2,040	1,390	290	100	260	0
Widener U All Campuses	0	0	0	0	0	0
Rhode Island, total	107,266	78,515	972	2,040	23,609	2,130
Public, total	39,575	36,337	734	324	2,180	0
U of Rhode Island	39,575	36,337	734	324	2,180	0
Private, total	67,691	42,178	238	1,716	21,429	2,130
Brown University	67,621	42,139	238	1,716	21,402	2,126
Providence College	70	39	0	0	27	4
South Carolina, total	217,881	120,015	20,887	10,678	48,596	17,705
Public, total	217,881	120,015	20,887	10,678	48,596	17,705
Clemson University	84,836	28,109	16,301	5,887	30,408	4,131
Med U of South Carolina	54,426	40,637	0	1,134	2,579	10,076
U of South Carolina	78,619	51,269	4,586	3,657	15,609	3,498
South Dakota, total	25,440	11,128	9,046	738	3,024	1,504
Public, total	25,440	11,128	9,046	738	3,024	1,504
SD Sch of Mines & Tech	5,015	3,278	746	31	951	9
South Dakota State U	14,925	5,500	6,683	707	1,213	822
U of South Dakota	5,500	2,350	1,617	0	860	673
Tennessee, total	317,090	195,456	35,761	16,823	50,204	18,846
Public, total	188,875	88,768	35,673	13,726	38,981	11,727
East Tennessee State U	2,255	738	124	4	83	1,306
Middle Tennessee State U	535	119	9	5	293	109
Tennessee State U	9,137	7,983	214	55	885	0
Tennessee Tech U	9,188	1,250	4,599	1,367	1,972	0
The University of Memphis	18,429	4,954	4,580	536	7,210	1,149
U of Tennessee System	149,331	73,724	26,147	11,759	28,538	9,163
Private, total	128,215	106,688	88	3,097	11,223	7,119
Meharry Medical College	11,212	11,004	0	0	0	208
Vanderbilt University	117,003	95,684	88	3,097	11,223	6,911
Texas, total	1,513,143	793,088	172,544	109,887	248,373	189,251
Public, total	1,274,320	658,101	166,228	93,280	222,409	134,302
Lamar University	2,407	1,451	655	208	61	32
Sam Houston State U	5,490	4,495	501	293	201	0
Stephen F Austin St U	3,990	1,684	123	516	1,523	144
Texas A&M U-Commerce	263	80	37	1	0	145

See explanatory information and SOURCE at end of table.

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
Texas, continued:						
Public, continued:						
Texas A&M University	366,983	148,675	84,632	26,947	103,041	3,688
Texas Tech University	43,000	13,013	12,023	5,634	9,915	2,415
Texas Woman's University	1,818	1,006	561	251	0	0
U North TX Health Sci Ctr	6,499	4,847	257	384	270	741
U TX Arlington	24,010	14,804	4,310	3,245	1,651	0
U TX Austin	241,606	147,808	17,241	15,029	19,582	41,946
U TX Dallas	13,562	5,583	1,432	1,113	2,954	2,480
U TX El Paso	13,548	10,471	1,586	428	1,063	0
U TX Hlth Sci Ctr San Ant	83,028	51,203	6,642	9,021	11,294	4,868
U TX MD Anderson Cncr	120,964	42,794	0	0	47,699	30,471
U TX Med Br Galveston	73,759	38,323	11,421	6,008	10,118	7,889
U TX SW Med Ctr Dallas	130,162	81,468	7,206	13,801	1,109	26,578
UT Houston Hlth Sci Ctr	82,803	61,456	547	7,403	4,549	8,848
University of Houston	49,178	25,448	12,778	1,341	6,486	3,125
University of North Texas	11,250	3,492	4,276	1,657	893	932
Private, total	238,823	134,987	6,316	16,607	25,964	54,949
Baylor Col of Dentistry	1,363	822	97	309	49	86
Baylor Col of Medicine	184,613	92,294	3,872	13,655	23,428	51,364
Baylor University	1,251	433	33	111	391	283
Rice University	39,696	33,238	1,889	1,898	0	2,671
Southern Methodist U	9,050	6,007	283	552	1,692	516
Texas Christian U	2,787	2,159	142	82	404	0
University of Dallas	63	34	0	0	0	29
Utah, total	210,519	146,304	17,124	10,304	27,828	8,959
Public, total	196,132	137,552	16,442	8,439	25,201	8,498
University of Utah	114,423	93,788	741	3,825	9,373	6,696
Utah State University	81,709	43,764	15,701	4,614	15,828	1,802
Private, total	14,387	8,752	682	1,865	2,627	461
Brigham Young University	14,387e	8,752e	682e	1,865e	2,627e	461e
Vermont, total	53,659	31,521	2,524	5,231	10,660	3,723
Public, total	53,659	31,521	2,524	5,231	10,660	3,723
University of Vermont	53,659	31,521	2,524	5,231	10,660	3,723
Virginia, total	448,041	259,135	43,599	47,361	68,029	29,917
Public, total	423,676	245,078	43,599	39,580	67,930	27,489
Col of William & Mary	25,183	13,020	2,067	251	9,009	836
George Mason University	23,230	16,430	605	449	2,619	3,127
Old Dominion University	17,577	9,266	3,888	2,233	2,190	0
University of Virginia	134,853	80,589	5,764	17,847	14,962	15,691
VA Polytech Inst & St U	143,815	80,319	28,776	11,365	19,905	3,450
Virginia Commonwealth U	79,018	45,454	2,499	7,435	19,245	4,385
Private, total	24,365	14,057	0	7,781	99	2,428
Eastern VA Med School	17,730	10,203	0	5,039	60	2,428
Hampton University	3,854	3,854	0	0	0	0
Institute of Textile Tech	2,781	0	0	2,742	39	0
Washington, total	505,113	361,502	11,356	39,329	76,573	16,353
Public, total	505,113	361,502	11,356	39,329	76,573	16,353
U of Washington	406,472	312,695	8,307	36,180	42,531	6,759
Washington State U	98,641	48,807	3,049	3,149	34,042	9,594

See explanatory information and SOURCE at end of table.

Table B-29. R&D expenditures at doctorate-granting institutions, by State, control, and source of funds: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Federal Government	State and local governments	Industry	Institutional funds	All other sources
West Virginia, total	55,206	31,034	2,289	3,608	14,450	3,825
Public, total	55,206	31,034	2,289	3,608	14,450	3,825
Marshall University	234	234	0	0	0	0
WV Sch of Osteo Med	128	0	0	0	128	0
West Virginia University	54,844	30,800	2,289	3,608	14,322	3,825
Wisconsin, total	485,560	277,997	42,093	18,300	93,718	53,452
Public, total	432,249	241,200	41,599	14,123	88,502	46,825
U WI Madison	412,570	233,174	37,560	13,871	82,751	45,214
U WI Milwaukee	19,679	8,026	4,039	252	5,751	1,611
Private, total	53,311	36,797	494	4,177	5,216	6,627
Marquette University	5,946	2,270	492	1,158	670	1,356
Medical Col of Wisconsin	47,365	34,527	2	3,019	4,546	5,271
Wyoming, total	40,553	14,991	3,768	2,086	18,280	1,428
Public, total	40,553	14,991	3,768	2,086	18,280	1,428
University of Wyoming	40,553	14,991	3,768	2,086	18,280	1,428
Puerto Rico, total	72,719	42,210	20,873	2,294	6,685	657
Public, total	65,623	35,625	20,754	2,294	6,368	582
U PR Mayaguez	44,502	19,568	20,392	2,275	2,267	0
U PR Med Sci Campus	15,005	12,191	317	0	2,053	444
U PR Rio Piedras	6,116	3,866	45	19	2,048	138
Private, total	7,096	6,585	119	0	317	75
Ponce School of Medicine	4,450	4,212	101	0	62	75
Pont Catholic U of PR	20e	20e	0	0	0	0
U Ctrl Del Caribe Esc Med	2,626	2,353	18	0	255	0

NOTE: Because of rounding, detail may not add to totals.

KEY: . = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Table B-30. R&D expenditures at doctorate-granting institutions, by geographic division, State, and science and engineering field: fiscal year 1996

[Dollars in thousands]

Division and State	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total	22,480,793	3,611,532	2,177,657	1,407,482	952,084	12,501,127	359,469	1,066,161	405,281
New England	1,856,701	300,197	220,962	166,198	64,101	893,851	36,902	113,198	56,292
Connecticut	388,134	41,008	22,190	11,088	6,629	279,412	11,111	14,782	1,914
Maine	34,684	3,800	1,470	6,122	137	21,837	250	1,067	1
Massachusetts	1,174,320	230,516	181,605	95,456	49,374	465,046	18,636	86,798	46,889
New Hampshire	98,638	8,398	4,944	25,618	1,910	49,116	887	3,644	4,121
Rhode Island	107,266	14,384	9,772	27,629	10,766	31,674	5,623	6,816	602
Vermont	53,659	2,091	981	285	285	46,766	395	91	2,765
Middle Atlantic	3,362,846	512,548	278,113	134,205	196,961	1,978,399	72,556	158,553	31,511
New Jersey	452,917	91,519	47,404	31,707	26,605	203,511	12,692	30,234	9,245
New York	1,720,183	186,819	154,707	73,970	84,936	1,129,077	37,802	49,207	3,665
Pennsylvania	1,189,746	234,210	76,002	28,528	85,420	645,811	22,062	79,112	18,601
East North Central	3,215,400	571,618	319,592	108,456	89,533	1,736,876	66,263	219,323	103,739
Illinois	875,520	110,587	93,516	34,238	23,460	467,376	19,314	40,571	80,458
Indiana	390,670	74,691	57,619	6,445	14,232	191,823	9,971	31,106	4,783
Michigan	808,117	152,740	60,220	28,428	24,550	440,283	14,011	79,153	8,732
Ohio	655,533	174,053	50,231	12,136	16,801	343,954	7,637	32,687	8,034
Wisconsin	485,560	59,547	42,006	27,209	10,490	293,440	15,330	35,806	1,732
West North Central	1,519,016	201,639	88,318	42,654	43,807	1,043,202	19,112	59,388	20,896
Iowa	332,402	63,186	24,360	3,419	12,817	202,666	2,632	17,810	5,512
Kansas	181,775	27,488	15,037	9,620	1,864	109,331	2,065	4,892	11,478
Minnesota	341,179	34,080	15,922	10,447	16,266	244,893	7,198	12,373	0
Missouri	409,658	32,585	20,766	6,138	10,900	317,608	5,152	14,929	1,580
Nebraska	156,713	15,424	5,934	8,818	1,330	119,931	1,418	3,513	345
North Dakota	71,649	26,179	3,353	715	606	35,051	640	3,771	1,534
South Dakota	25,440	2,697	2,946	3,497	24	13,722	7	2,100	447
South Atlantic	4,220,321	785,117	413,494	268,679	267,776	2,195,971	55,769	201,067	32,454
Delaware	54,154	17,369	8,501	8,205	4,507	11,544	1,106	2,922	0
District of Columbia	201,445	14,104	16,907	847	14,199	138,318	2,728	13,096	1,246
Florida	596,102	88,165	69,791	63,344	15,335	323,609	15,968	18,321	1,569
Georgia	709,595	175,732	48,902	32,014	42,853	351,796	13,478	41,958	2,862
Maryland	1,212,215	282,308	177,918	63,052	139,700	487,338	3,744	42,397	15,758
North Carolina	725,688	72,427	37,352	25,384	19,478	511,346	9,392	47,484	2,825
South Carolina	217,881	44,535	15,180	9,924	11,534	115,065	1,431	14,641	5,571
Virginia	448,041	77,435	37,471	59,030	15,878	231,285	7,893	18,588	461
West Virginia	55,208	13,042	1,472	6,879	4,292	25,670	29	1,660	2,162
East South Central	932,312	145,793	61,317	31,920	27,360	598,263	10,298	25,783	31,578
Alabama	342,171	51,868	21,814	8,939	8,395	224,315	2,132	5,849	18,859
Kentucky	148,376	21,672	4,912	270	2,057	109,086	689	3,739	5,951
Mississippi	124,675	22,722	12,831	5,030	2,817	72,094	380	5,222	3,579
Tennessee	317,090	49,531	21,760	17,681	14,091	192,768	7,097	10,973	3,189
West South Central	2,115,715	355,914	150,467	167,965	65,515	1,249,557	20,523	79,329	26,445
Arkansas	93,107	9,096	4,327	2,729	818	72,074	537	3,151	375
Louisiana	307,839	48,442	15,740	23,572	6,533	191,722	1,021	11,795	9,014
Oklahoma	201,626	42,099	16,587	18,541	4,177	95,672	5,137	17,037	2,376
Texas	1,513,143	256,277	113,813	123,123	53,987	890,089	13,828	47,346	14,680
Mountain	1,468,944	284,989	209,473	140,804	52,048	627,275	24,635	63,666	65,754
Arizona	375,881	49,410	105,128	17,604	10,584	158,871	6,643	22,125	5,516
Colorado	406,582	65,200	54,618	54,120	13,869	183,902	10,972	16,171	7,730
Idaho	64,930	9,063	4,517	3,929	174	45,477	207	1,563	0
Montana	71,518	7,836	7,771	965	3,809	44,460	28	3,063	3,586
Nevada	84,970	6,765	5,123	26,633	2,835	23,546	752	6,759	12,557
New Mexico	213,691	92,633	11,733	11,948	7,416	53,707	3,448	8,767	24,039
Utah	210,519	50,392	17,113	16,965	12,340	99,687	2,333	4,742	6,947
Wyoming	40,553	3,690	3,470	8,640	1,021	17,625	252	476	5,379
Pacific	3,717,113	449,039	432,842	341,894	139,476	2,120,464	52,661	144,125	36,612
Alaska	71,381	3,704	13,752	32,044	94	18,357	0	3,430	0
California	2,791,208	377,146	352,385	211,225	113,616	1,574,295	38,216	101,627	22,698
Hawaii	73,302	2,752	22,069	8,135	1,564	32,113	165	2,890	3,614
Oregon	276,109	23,074	19,682	31,569	15,461	169,646	5,667	10,540	470
Washington	505,113	42,363	24,954	58,921	8,741	326,053	8,613	25,638	9,830
Outlying Areas	72,719	4,678	3,079	4,707	507	57,269	750	1,729	0

NOTE: Because of rounding, detail may not add to totals.

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
United States, total	22,480,793	3,611,532	2,177,657	1,407,482	952,084	12,501,127	359,469	1,066,161	405,281
Public, total	15,130,558	2,520,979	1,389,754	1,111,610	489,178	8,252,570	262,771	815,316	288,380
Private, total	7,350,235	1,090,553	787,903	295,872	462,906	4,248,557	96,698	250,845	116,901
Alabama, total	342,171	51,868	21,814	8,939	8,395	224,315	2,132	5,849	18,859
Public, total	342,171	51,868	21,814	8,939	8,395	224,315	2,132	5,849	18,859
Alabama A&M University	9,765i	447i	4,974i	0i	0i	4,292i	0i	52i	0i
Auburn University	87,358	18,579	2,872	422	606	46,720	842	2,041	15,276
The University of Alabama	21,806	10,084	3,388	1,936	1,667	1,629	117	2,674	311
U of Alabama Birmingham	170,193	8,015	1,372	10	259	159,287	970	280	0
U of Alabama Huntsville	38,176	14,156	8,906	6,246	5,147	359	1	89	3,272
U of South Alabama	14,873	587	302	325	716	12,028	202	713	0
Alaska, total	71,381	3,704	13,752	32,044	94	18,357	0	3,430	0
Public, total	71,381	3,704	13,752	32,044	94	18,357	0	3,430	0
U of Alaska Fairbanks	71,381	3,704i	13,752i	32,044i	94i	18,357i	0i	3,430i	0i
Arizona, total	375,881	49,410	105,128	17,604	10,584	158,871	6,643	22,125	5,516
Public, total	375,881	49,410	105,128	17,604	10,584	158,871	6,643	22,125	5,516
Arizona State University	84,653	28,147	18,962	7,166	3,067	10,196	4,566	8,347	4,202
Northern Arizona U	11,572	367	1,523	1,282	111	5,755	138	2,117	279
University of Arizona	279,656	20,896	84,643	9,156	7,406	142,920	1,939	11,661	1,035
Arkansas, total	93,107	9,096	4,327	2,729	818	72,074	537	3,151	375
Public, total	93,107	9,096	4,327	2,729	818	72,074	537	3,151	375
U Arkansas Main	59,753	9,096	4,327	2,729	818	38,720	537	3,151	375
U Arkansas Medical Sci	33,354	0	0	0	0	33,354	0	0	0
California, total	2,791,208	377,146	352,385	211,225	113,616	1,574,295	38,216	101,627	22,698
Public, total	2,031,073	220,596	216,566	172,799	41,100	1,244,756	30,599	86,178	18,479
CA St U Long Beach	5,843	4,394i	432i	510i	0i	461i	31i	0i	15i
San Diego St University	43,201	2,971	2,359	1,694	756	22,479	3,327	2,467	7,148
U CA Berkeley	316,320	69,000	67,181	5,232	5,144	125,648	6,331	32,559	5,225
U CA Davis	254,604	17,349	10,505	5,633	2,212	214,906	1,642	2,152	205
U CA Irvine	119,647	13,048	20,496	2,148	3,496	73,801	1,953	4,236	469
U CA Los Angeles	354,645	28,509	24,079	15,086	10,934	241,194	7,676	24,962	2,205
U CA Riverside	71,495	6,087	5,475	4,259	926	52,873	1,174	701	0
U CA San Diego	371,509	31,373	39,637	109,260	1,586	179,999	4,216	5,066	372
U CA San Francisco	320,757	0	0	0	0	320,757	0	0	0
U CA Santa Barbara	91,284	37,759	20,133	12,405	6,719	3,051	3,564	6,933	720
U CA Santa Cruz	51,062	2,455	23,722	11,504	1,707	9,587	685	1,372	30
U CA, Office of the Pres	0	0	0	0	0	0	0	0	0
US Naval Postgrad School	30,706	7,651i	2,547i	5,068i	7,620i	0i	0i	5,730i	2,090i
Private, total	760,135	156,550	135,819	38,426	72,516	329,539	7,617	15,449	4,219
Biola University	0	0	0	0	0	0	0	0	0
C R Drew U of Med & Sci	16,386	0	0	0	0	16,386	0	0	0
CA Inst of Integral Stu	0	0	0	0	0	0	0	0	0
CA Sch Prof Psy Brk/Alm	133	0	0	0	0	0	133	0	0
CA Sch Prof Psy Fresno	1,570	0	0	0	0	0	1,570	0	0
CA Sch Prof Psy L A	225e	0i	0i	0i	0i	0i	225i	0i	0i
CA Sch Prof Psy S Diego	517	0	0	0	0	0	517	0	0
California Inst of Tech	157,005	29,238	75,331	15,444	10,480	24,137	0	989	1,386
Claremont Graduate Sch	1,100	0	0	0	38	0	313	749	0
Fuller Theological Sem	11	0	0	0	0	0	11	0	0
Golden Gate University	0	0	0	0	0	0	0	0	0
Loma Linda University	10,837	0	0	0	0	9,724	0	1,113	0
Pepperdine University	0	0	0	0	0	0	0	0	0
Santa Clara University	1,954i	1,066i	126i	0i	89i	275i	8i	390i	0i
Stanford University	324,821	89,231	51,047	9,906	23,869	142,816	2,392	5,560	0
U of Southern California	244,258	36,933	9,288	13,067	38,026	135,848	2,446	6,640	2,010
US International U	0	0	0	0	0	0	0	0	0
University of San Diego	252	42i	27i	9i	14i	147i	2i	8i	3i
University of the Pacific	860	40	0	0	0	0	0	0	820

See explanatory information and SOURCE at end of table

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
California, continued									
Private, continued									
Western U of Hlth Sci	206	0	0	0	0	206	0	0	0
Colorado, total	406,582	65,200	54,618	54,120	13,869	183,902	10,972	16,171	7,730
Public, total	397,854	62,600	51,382	54,120	13,864	183,268	9,587	15,303	7,730
Colorado School of Mines	19,291	14,406	2,225	548	2,022	0	0	90	0
Colorado State University	126,701	17,406	8,126	12,853	2,856	66,166	2,394	9,207	7,693
U of Northern Colorado	561	0	236	0	0	238	74	13	0
University of Colorado	251,301	30,783	40,795	40,719	8,986	116,864	7,119	5,993	37
Private, total	8,728	2,600	3,236	0	5	634	1,385	868	0
University of Denver	8,728	2,600	3,236	0	5	634	1,385	868	0
Connecticut, total	388,134	41,008	22,190	11,088	6,629	279,412	11,111	14,782	1,914
Public, total	147,522	34,200	3,896	8,516	2,541	78,643	5,655	12,157	1,914
University of Connecticut	147,522	34,200	3,896	8,516	2,541	78,643	5,655	12,157	1,914
Private, total	240,612	6,808	18,294	2,572	4,088	200,769	5,456	2,625	0
University of Hartford	466	223	70	0	16	68	35	54	0
Wesleyan University	5,245	0	2,371	321	122	1,673	527	231	0
Yale University	234,901	6,585	15,853	2,251	3,950	199,028	4,894	2,340	0
Delaware, total	54,154	17,369	8,501	8,205	4,507	11,544	1,106	2,922	0
Public, total	54,154	17,369	8,501	8,205	4,507	11,544	1,106	2,922	0
University of Delaware	54,154	17,369	8,501	8,205	4,507	11,544	1,106	2,922	0
District of Columbia, total	201,445	14,104	16,907	847	14,199	138,318	2,728	13,096	1,246
Private, total	201,445	14,104	16,907	847	14,199	138,318	2,728	13,096	1,246
American University	3,279	0	910	0	61	935	84	1,289	0
Catholic U of America	7,427	1,516	4,141	0	0	690	639	441	0
George Washington U	49,263	8,658	1,905	37	7,205	24,344	456	6,346	312
Georgetown University	112,582	0	4,675	808	905	103,154	160	2,791	89
Howard University	28,894	3,930	5,276	2	6,028	9,195	1,389	2,229	845
Florida, total	596,102	88,165	69,791	63,344	15,335	323,609	15,968	18,321	1,569
Public, total	456,775	83,435	66,858	32,543	13,935	233,123	12,386	12,995	1,500
Florida A&M University	22,474	4,697	2,955	2,608	1,270	10,776	0	168	0
Florida Atlantic U	10,576	7,018	384	31	972	742	1,297	132	0
Florida International U	16,856	8,396	1,475	427	1,066	2,145	749	2,598	0
Florida State University	78,125	1,635	41,672	14,683	3,787	9,992	2,659	3,697	0
U of Central Florida	21,488	14,742	5,091	0	401	375	831	48	0
U of South Florida	94,157	16,501	1,811	11,631	1,033	56,446	4,674	2,061	0
University of Florida	213,099	30,446	13,470	3,163	5,406	152,647	2,176	4,291	1,500
Private, total	139,327	4,730	2,933	30,801	1,400	90,486	3,582	5,326	69
Florida Inst of Tech	8,013	2,609	1,110	1,315	724	1,398	857	0	0
Nova Southeastern U	1,258	0	0	1,111	0	8	126	0	13
University of Miami	130,056	2,121	1,823	28,375	676	89,080	2,599	5,326	56
Georgia, total	709,595	175,732	48,902	32,014	42,853	351,796	13,478	41,958	2,862
Public, total	489,075	154,358	32,016	22,994	37,448	191,129	11,949	37,070	2,111
Georgia Institute of Tech	225,633	149,412	17,984	12,696	30,706	4,790	2,440	6,029	1,576
Georgia State University	18,114	0	4,431	413	554	3,750	3,812	4,619	535
Medical Col of Georgia	35,971	0	0	0	0	35,971	0	0	0
University of Georgia	209,357	4,946	9,601	9,885	6,188	146,618	5,697	26,422	0
Private, total	220,520	21,374	16,886	9,020	5,405	160,667	1,529	4,888	751
Clark Atlanta University	34,566	5,714	6,000	9,020	4,365	8,585	0	882	0
Emory University	149,168	0	6,289	0	1,003	136,343	1,529	4,004	0
Inst Paper Sci and Tech	9,939	5,209	3,816	0	0	914	0	0	0
Mercer University	13,641	10,451	781	0	37	2,370	0	2	0

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Georgia, continued:									
Private, continued:									
Morehouse School of Med	13,206	0	0	0	0	12,455	0	0	751
Hawaii, total	73,302	2,752	22,069	8,135	1,564	32,113	165	2,890	3,614
Public, total	73,302	2,752	22,069	8,135	1,564	32,113	165	2,890	3,614
Univ of Hawaii Manoa	73,302	2,752	22,069	8,135	1,564	32,113	165	2,890	3,614
Idaho, total	64,930	9,063	4,517	3,929	174	45,477	207	1,563	0
Public, total	64,930	9,063	4,517	3,929	174	45,477	207	1,563	0
Idaho State University	8,732	586	2,475	1,115	37	4,267	0	252	0
University of Idaho	56,198	8,477	2,042	2,814	137	41,210	207	1,311	0
Illinois, total	875,520	110,587	99,516	34,238	23,460	467,376	19,314	40,571	80,458
Public, total	433,408	77,460	52,856	28,940	13,184	171,787	10,174	31,357	47,650
Illinois State University	4,608	0	383	24	1,273	1,089	9	1,830	0
Northern Illinois U	11,674	1,014	2,225	414	230	2,748	543	4,490	10
Sthrn IL U Carbondale	28,578	4,188	1,763	290	924	15,455	569	1,401	3,988
U of Illinois Urbana	267,008	61,712	42,032	27,238	7,776	63,634	5,566	16,108	42,942
University of IL Chicago	121,540	10,546	6,453	974	2,981	88,861	3,487	7,528	710
Private, total	442,112	33,127	46,660	5,298	10,276	295,589	9,140	9,214	32,808
DePaul University	1,300	0	51	0	121	226	902	0	0
Finch U Hlth Sci Chicago	7,022	0	0	0	0	6,686	336	0	0
Illinois Inst of Tech	16,000	4,725	6,378	0	1,816	3,037	24	20	0
Loyola U of Chicago	42,565	0	528	0	771	37,637	1,019	2,092	518
Midwestern University	1,512	0	0	0	0	1,512	0	0	0
Northwestern University	187,262	28,402	11,844	508	4,730	103,209	1,458	4,821	32,290
Rush University	48,772	0	0	0	0	45,056	3,716	0	0
University of Chicago	137,679	0	27,859	4,790	2,838	98,226	1,685	2,281	0
Indiana, total	390,670	74,691	57,619	6,445	14,232	191,823	9,971	31,106	4,783
Public, total	366,114	67,364	46,087	6,445	13,005	187,837	9,572	31,021	4,783
Ball State University	2,667	808	260	53	156	978	76	324	12
Indiana State University	1,548	192	90	364	0	589	224	64	25
Indiana University	154,948	3,874	26,645	1,853	4,280	94,500	6,846	12,674	4,276
Purdue University	206,951	62,490	19,092	4,175	8,569	91,770	2,426	17,959	470
Private, total	24,556	7,327	11,532	0	1,227	3,986	399	85	0
University of Notre Dame	24,556	7,327	11,532	0	1,227	3,986	399	85	0
Iowa, total	332,402	63,186	24,360	3,419	12,817	202,666	2,632	17,810	5,512
Public, total	332,086	63,186	24,360	3,419	12,817	202,350	2,632	17,810	5,512
Iowa State University	151,914	42,150	9,407	1,359	11,067	71,154	709	11,355	4,713
U of Iowa	178,228	19,965	14,860	1,644	1,735	131,084	1,923	6,218	799
U of Northern Iowa	1,944	1,071	93	416	15	112	0	237	0
Private, total	316	0	0	0	0	316	0	0	0
Maharishi U of Mgmt	0	0	0	0	0	0	0	0	0
U Osteo Med & Hlth Sci	316	0	0	0	0	316	0	0	0
Kansas, total	181,775	27,488	15,037	9,620	1,864	109,331	2,065	4,892	11,478
Public, total	181,775	27,488	15,037	9,620	1,864	109,331	2,065	4,892	11,478
Kansas State University	71,222	11,376	5,734	238	1,001	48,419	825	2,195	1,434
University of Kansas	100,649	8,108	8,645	9,360	656	60,097	1,220	2,519	10,044
Wichita State University	9,904	8,004	658	22	207	815	20	178	0

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Kentucky, total	148,376	21,672	4,912	270	2,057	109,086	689	3,739	5,951
Public, total	148,376	21,672	4,912	270	2,057	109,086	689	3,739	5,951
University of Kentucky	118,721	19,565	3,173	248	1,530	85,515	625	2,114	5,951
University of Louisville	29,655	2,107	1,739	22	527	23,571	64	1,625	0
Private, total	0	0	0	0	0	0	0	0	0
Spalding University	0	0	0	0	0	0	0	0	0
Louisiana, total	307,839	48,442	15,740	23,572	6,533	191,722	1,021	11,795	9,014
Public, total	218,991	41,490	11,985	23,388	5,872	122,159	504	11,511	2,082
Louisiana St U, All Camp	196,328	34,767	11,141	23,221	2,725	115,734	356	7,225	1,159
Louisiana Tech University	3,100	2,263	0	0	0	648	0	0	189
Northeast Louisiana U	6,134	0	0	0	0	2,588	0	3,546	0
U of Southwestern LA	13,429	4,460	844	167	3,147	3,189	148	740	734
Private, total	88,848	6,952	3,755	184	661	69,563	517	284	6,932
Tulane University	83,660	6,952	3,132	184	661	68,169	517	284	3,761
Xavier University of LA	5,188	0	623	0	0	1,394	0	0	3,171
Maine, total	34,684	3,800	1,470	6,122	137	21,837	250	1,067	1
Public, total	34,684	3,800	1,470	6,122	137	21,837	250	1,067	1
U of Maine	34,684	3,800	1,470	6,122	137	21,837	250	1,067	1
Maryland, total	1,212,215	282,308	177,918	63,052	139,700	487,338	3,744	42,397	15,758
Public, total	413,747	68,843	59,454	32,874	22,949	196,478	2,713	30,436	0
U MD Baltimore County	14,304	3,306	2,584	0	1,789	5,335	734	556	0
U MD Center for EES	21,448	0	0	21,448	0	0	0	0	0
U MD College Park	216,957	65,537	56,690	10,426	21,160	31,285	1,979	29,880	0
U MD Eastern Shore	1,980	0	180	1,000	0	800	0	0	0
U of MD Baltimore	122,207	0	0	0	0	122,207	0	0	0
Univ Svcs U of Hlth Sci	36,851	0	0	0	0	36,851	0	0	0
Private, total	798,468	213,465	118,464	30,178	116,751	290,860	1,031	11,961	15,758
Johns Hopkins Univ	798,468	213,465	118,464	30,178	116,751	290,860	1,031	11,961	15,758
Massachusetts, total	1,174,320	230,516	181,605	95,456	49,374	465,046	18,636	86,798	46,889
Public, total	165,751	19,146	26,259	8,056	12,696	88,377	3,449	6,727	1,041
U MA Amherst	73,678	10,685	20,647	6,042	11,896	20,387	2,529	1,084	408
U MA Boston	10,898	9	186	1,990	60	2,616	748	5,065	224
U MA Lowell	17,834	8,452	5,426	24	740	2,033	172	578	409
U MA Worcester	63,341	0	0	0	0	63,341	0	0	0
Private, total	1,008,569	211,370	155,346	87,400	36,678	376,669	15,187	80,071	45,848
Boston College	14,504	0	4,323	725	6,712	1,772	236	736	0
Boston University	110,267	8,639	13,156	1,205	2,958	75,059	250	1,408	7,592
Brandeis University	36,760	0	3,785	0	1,322	17,513	1,212	12,928	0
Clark University	1,954	0	797	721	59	100	191	86	0
Harvard University	282,443	4,412	25,245	11,595	2,667	178,308	3,173	45,553	11,490
MA Col Phar Allied Hlth	205	0	0	0	0	205	0	0	0
MA Institute of Tech	380,612	164,816	97,350	14,361	19,594	36,104	7,213	14,408	26,766
Northeastern University	17,980	7,617	3,717	0	1,684	3,313	847	802	0
Smith College	2,066	0	377	82	225	907	147	328	0
Tufts University	79,356	4,105	6,343	9	847	62,376	1,918	3,758	0
Woods Hole Oceanograph	73,015	14,313	0	58,702	0	0	0	0	0
Worcester Polytech Inst	9,407	7,468	253	0	610	1,012	0	64	0
Michigan, total	808,117	152,740	60,220	28,428	24,550	440,283	14,011	79,153	8,732
Public, total	805,196	152,481	59,101	27,647	24,546	440,140	14,008	78,896	8,377
Central Michigan U	1,043	0	186	121	129	206	93	204	104
Michigan State University	182,589	16,403	27,871	572	7,545	116,166	2,250	11,508	274
Michigan Tech University	23,882	14,801	1,883	2,183	484	3,938	0	579	14
Oakland University	6,832	1,463	834	0	278	3,881	44	0	332

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Michigan, continued:									
Public, continued:									
University of Michigan	468,876	108,668	19,179	22,940	13,117	230,469	9,718	58,942	5,843
Wayne State University	112,151	9,439	8,649	0	987	84,603	1,886	4,923	1,664
Western Michigan U	9,823	1,707 i	499 i	1,831 i	2,006 i	877 i	17 i	2,740 i	146 i
Private, total	2,921	259	1,119	781	4	143	3	257	355
Andrews University	366	0	12	0	4	119	3	228	0
U of Detroit Mercy	2,555	259	1,107	781	0	24	0	29	355
Minnesota, total	341,179	34,080	15,922	10,447	16,266	244,893	7,198	12,373	0
Public, total	341,179	34,080	15,922	10,447	16,266	244,893	7,198	12,373	0
University of Minnesota	341,179	34,080	15,922	10,447	16,266	244,893	7,198	12,373	0
Mississippi, total	124,675	22,722	12,831	5,030	2,817	72,094	380	5,222	3,579
Public, total	124,675	22,722	12,831	5,030	2,817	72,094	380	5,222	3,579
Jackson State University	5,224	865	1,464	0	1,678	981	45	15	176
Mississippi State U	84,124	18,056	2,109	2,900	667	53,126	8	4,448	2,810
U Mississippi, All Camp	26,215	3,650	4,595	0	47	17,174	132	617	0
U Southern Mississippi	9,112	151	4,663	2,130	425	813	195	142	593
Missouri, total	409,658	32,585	20,766	6,138	10,900	317,608	5,152	14,929	1,580
Public, total	164,490	27,658	12,396	1,948	3,787	99,656	4,255	13,244	1,546
U of Missouri Columbia	123,133	13,324	6,058	722	1,143	88,140	2,840	10,711	195
U of Missouri Kansas City	12,803	86	684	189	1,316	9,130	485	454	459
U of Missouri Rolla	20,652	14,248	3,302	1,037	1,138	837	8	82	0
U of Missouri St Louis	7,706	0	2,352	0	190	1,353	922	1,997	892
U of Missouri Sys Admn	196	0	0	0	0	196	0	0	0
Private, total	245,168	4,927	8,370	4,190	7,113	217,952	897	1,685	34
Forest Inst of Prof Psy	5	0	0	0	0	0	5	0	0
Kirksville Col Osteo Med	747	0	0	0	0	747	0	0	0
Saint Louis University	25,099	13	2	1,023	27	23,950	43	7	34
U of Health Sci (MO)	677	0 i	0 i	0 i	0 i	677 i	0 i	0 i	0 i
Washington University	218,640	4,914	8,368	3,167	7,086	192,578	849	1,678	0
Montana, total	71,518	7,836	7,771	965	3,809	44,460	28	3,063	3,586
Public, total	71,518	7,836	7,771	965	3,809	44,460	28	3,063	3,586
Montana St U Bozeman	50,097	7,836	7,223	607	771	30,569	0	1,909	1,182
The University of Montana	21,421	0	548	358	3,038	13,891	28	1,154	2,404
Nebraska, total	156,713	15,424	5,934	8,818	1,330	119,931	1,418	3,513	345
Public, total	145,072	15,424	5,782	8,775	1,330	108,485	1,418	3,513	345
U of NE Med Ctr Omaha	42,612	0	0	0	0	42,612	0	0	0
U of Nebraska Lincoln	102,460	15,424	5,782	8,775	1,330	65,873	1,418	3,513	345
Private, total	11,641	0	152	43	0	11,446	0	0	0
Creighton University	11,641	0	152	43	0	11,446	0	0	0
Nevada, total	84,970	6,765	5,123	26,633	2,835	23,546	752	6,759	12,557
Public, total	84,970	6,765	5,123	26,633	2,835	23,546	752	6,759	12,557
Desert Research Institute	20,100	0	0	13,500	0	3,300	0	3,300	0
U of Nevada Las Vegas	16,893	1,847 i	3,047 i	5,611 i	2,700 i	1,982 i	49 i	1,427 i	230 i
U of Nevada Reno	47,977	4,918	2,076	7,522	135	18,264	703	2,032	12,327

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
New Hampshire, total	98,638	8,398	4,944	25,618	1,910	49,116	887	3,644	4,121
Public, total	45,693	3,226	1,656	24,692	950	8,189	280	3,390	3,310
U of New Hampshire	45,693	3,226	1,656	24,692	950	8,189	280	3,390	3,310
Private, total	52,945	5,172	3,288	926	960	40,927	607	254	811
Dartmouth College	52,945	5,172	3,288	926	960	40,927	607	254	811
New Jersey, total	452,917	91,519	47,404	31,707	26,605	203,511	12,692	30,234	9,245
Public, total	322,748	42,623	20,905	22,836	19,810	182,966	6,943	17,451	9,214
NJ Inst of Technology	39,110	17,937	2,509	9,540	3,556	0	0	289	5,279
Rutgers the State U NJ	185,103	24,686	18,396	13,296	16,254	84,431	6,943	17,162	3,935
U Med & Dent NJ	98,535	0	0	0	0	98,535	0	0	0
Private, total	130,169	48,896	26,499	8,871	6,795	20,545	5,749	12,783	31
Fairleigh Dickinson U	140	0i	23i	0i	15i	21i	6i	44i	31i
Princeton University	112,380	36,447	24,918	8,871	6,706	18,840	5,743	10,855	0
Seton Hall University	2,400e	0i	716i	0i	0i	1,684i	0i	0i	0i
Stevens Inst of Tech	15,249	12,449	842	0	74	0	0	1,884	0
New Mexico, total	213,691	92,633	11,733	11,948	7,416	53,707	3,448	8,767	24,039
Public, total	213,691	92,633	11,733	11,948	7,416	53,707	3,448	8,767	24,039
NM Inst Mining & Tech	20,580	13,890	2,313	3,709	308	354	6	0	0
New Mexico State Univ	76,493	42,742	3,163	6,046	2,840	20,257	159	1,083	203
University of New Mexico	116,618	36,001	6,257	2,193	4,268	33,096	3,283	7,684	23,836
New York, total	1,720,183	186,819	154,707	73,970	84,936	1,129,077	37,802	49,207	3,665
Public, total	421,572	43,427	39,631	28,036	15,435	259,671	17,189	17,976	207
CUNY Grad Sch & U Ctr	2,925i	0i	0i	0i	306i	1,685i	391i	543i	0i
CUNY H H Lehman Col	1,199	0	289	31	188	204	283	204	0
SUNY Albany	66,247	0	4,139	6,741	784	44,725	3,309	6,549	0
SUNY Binghamton	18,500	5,278	3,044	626	1,294	2,083	3,594	2,581	0
SUNY Buffalo	137,701	23,367	8,038	872	6,421	87,207	6,998	4,593	205
SUNY Col Env Sci Frstry	21,969	7,182i	1,306i	2,265i	0i	11,079i	0i	137i	0i
SUNY Col of Optometry	641	0	0	0	0	641	0	0	0
SUNY Hlth Sci Ctr Brklyn	31,920i	0i	0i	0i	0i	31,920i	0i	0i	0i
SUNY Hlth Sci Ctr Syrcse	14,093	0i	0i	0i	0i	14,093i	0i	0i	0i
SUNY Stony Brook	126,377	7,600	22,815	17,501	6,442	66,034	2,614	3,369	2
Private, total	1,298,611	143,392	115,076	45,934	69,501	869,406	20,613	31,231	3,458
Adelphi University	317	0	247	0	2	0	68	0	0
Albany Medical College	7,888	0	0	0	0	7,888	0	0	0
Alfred University	4,217	4,217	0	0	0	0	0	0	0
CUNY Mt Sinai Sch Med	92,405	0	0	0	0	92,405	0	0	0
Clarkson University	8,264	5,789	1,976	0	394	69	36	0	0
Columbia University	236,403	12,866	20,537	37,387	5,440	151,274	2,387	6,512	0
Cornell University	339,534	44,724	50,239	3,858	31,360	193,361	4,757	11,235	0
Fordham University	2,712	0	111	30	93	1,687	132	659	0
Hofstra University	2,290	1,612	0	0	518	160	0	0	0
Long Island University	155	5	31	56	0	49	0	14	0
New Sch for Soci Res	4,718i	0i	0i	0i	0i	198i	473i	4,047i	0i
New York Inst Technology	278	114	0	10	0	154	0	0	0
New York Medical College	16,372	0	0	0	0	16,372	0	0	0
New York University	145,874	0	7,000	470	10,943	116,437	4,773	5,319	932
Pace University All Cmp	0	0	0	0	0	0	0	0	0
Polytechnic University	10,964	5,229	2,252	0	3,483	0	0	0	0
Rensselaer Polytech Inst	37,917	26,694	5,365	1,345	2,701	789	253	137	633
Rochester Inst of Tech	8,118	1,523	2,475	1,390	0	2,560	0	0	170
St John's University (NY)	1,903	0	42	0	3	1,679	162	17	0
Syracuse University	34,322	9,328	5,231	959	10,201	3,873	960	2,368	1,402
Teachers Col, Columbia U	1,005	0	0	0	485	0	395	125	0
The Rockefeller Univ	105,595	0	6,478	0	487	98,630	0	0	0
Union College (NY)	1,016	187	289	101	49	248	116	16	10
University of Rochester	144,914	31,104	12,803	328	3,342	90,143	6,101	782	311

See explanatory information and SOURCE at end of table

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
New York, continued:									
Private, continued:									
Yeshiva University	91,430	0	0	0	0	91,430	0	0	0
North Carolina, total	725,688	72,427	37,352	25,384	19,478	511,346	9,392	47,484	2,825
Public, total	408,122	61,761	22,502	22,414	16,326	241,130	5,149	36,015	2,825
East Carolina University	6,817	0	238	1,080	87	4,921	0	429	62
NC State U Raleigh	190,748	61,709	12,234	11,818	7,557	88,772	964	4,931	2,763
U of NC Chapel Hill	208,529	0	9,760	9,516	8,628	146,892	4,048	29,685	0
U of NC Greensboro	2,028	52	270	0	54	545	137	970	0
Private, total	317,566	10,666	14,850	2,970	3,152	270,216	4,243	11,469	0
Duke University	242,235	10,666	13,366	2,970	2,928	197,213	4,243	10,849	0
Wake Forest University	75,331	0	1,484	0	224	73,003	0	620	0
North Dakota, total	71,849	26,179	3,353	715	606	35,051	640	3,771	1,534
Public, total	71,849	26,179	3,353	715	606	35,051	640	3,771	1,534
North Dakota State U	43,661	5,438	3,284	185	606	30,408	629	2,951	160
Univ of North Dakota	28,188	20,741	69	530	0	4,643	11	820	1,374
Ohio, total	655,533	174,053	60,231	12,136	16,801	343,954	7,637	32,687	8,034
Public, total	467,737	111,278	50,686	11,251	16,112	236,697	6,995	27,155	7,563
Air Force Inst of Tech	5,877	4,799	0	203	875	0	0	0	0
Bowling Green State U	3,942	85 i	1,243 i	38 i	54 i	1,207 i	405 i	311 i	599 i
Cleveland State U	10,884 i	4,009 i	631 i	3 i	111 i	731 i	132 i	5,267 i	0 i
Kent State University	11,497	301 i	8,013 i	296 i	738 i	769 i	1,246 i	126 i	8 i
Med Col of Ohio Toledo	13,367	0	0	0	0	13,367	0	0	0
Miami University (OH)	8,847	271 i	2,281 i	235 i	3 i	1,996 i	546 i	1,556 i	1,959 i
N E Ohio Univs Col Med	2,493	0	0	0	0	2,493	0	0	0
Ohio State University	262,147	61,403	20,229	9,878	12,685	133,876	2,982	17,826	3,268
Ohio University	18,329	10,174	2,408	96	120	4,827	426	242	36
University of Akron	15,507	5,503	7,571	71	659	736	40	927	0
University of Cincinnati	89,286	17,898	3,832	170	396	64,766	270	715	1,239
University of Toledo	8,180e	3,971 i	2,222 i	3 i	45 i	1,479 i	302 i	158 i	0 i
Wright State University	17,381	2,864	2,256	258	426	10,450	646	27	454
Private, total	187,796	62,775	9,545	885	689	107,257	642	5,532	471
Antioch University	0	0	0	0	0	0	0	0	0
Case Western Reserve U	143,435	25,625	5,451	437	533	106,472	561	4,356	0
The Union Institute	1,173	0	0	0	0	0	0	1,173	0
University of Dayton	43,188	37,150	4,094	448	156	785	81	3	471
Oklahoma, total	201,626	42,099	16,587	18,541	4,177	95,672	5,137	17,037	2,376
Public, total	192,031	34,975	15,868	18,018	3,749	94,907	5,132	17,006	2,376
Oklahoma State University	82,960	19,411	6,193	1,186	1,493	47,049	552	4,700	2,376
University of Oklahoma	109,071	15,564	9,675	16,832	2,256	47,858	4,580	12,306	0
Private, total	9,595	7,124	719	523	428	765	5	31	0
Oral Roberts University	30	20	0	0	0	10	0	0	0
University of Tulsa	9,565	7,104	719	523	428	755	5	31	0
Oregon, total	276,109	23,074	19,682	31,569	15,461	169,646	5,667	10,540	470
Public, total	254,697	20,126	13,154	28,181	6,913	169,646	5,667	10,540	470
Oregon Health Sciences U	80,333	0 i	0 i	0 i	0 i	76,710 i	3,623 i	0 i	0 i
Oregon State University	131,334	17,305	5,649	24,779	2,608	76,770	93	3,818	312
Portland State University	9,376	1,281	200	1,478	856	917	31	4,455	158
University of Oregon	33,654	1,540	7,305	1,924	3,449	15,249	1,920	2,267	0
Private, total	21,412	2,948	6,528	3,388	8,548	0	0	0	0
Oregon Grad Inst Sci Tech	21,412	2,948	6,528	3,388	8,548	0	0	0	0
Pacific University	0	0	0	0	0	0	0	0	0

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Pennsylvania, total	1,189,746	234,210	76,002	28,528	85,420	645,811	22,062	79,112	18,601
Public, total	584,859	147,284	36,935	23,382	10,355	292,737	13,837	44,989	15,340
Indiana U of PA All Cmp	562	0	10	2	0	100	35	415	0
Pennsylvania State U	337,938	138,718	25,164	23,222	7,703	94,400	6,612	30,178	11,941
Temple University	56,533	293	1,101	3	250	40,334	4,167	9,697	688
University of Pittsburgh	189,826	8,273	10,660	155	2,402	157,903	3,023	4,699	2,711
Private, total	604,887	86,926	39,067	5,146	75,065	353,074	8,225	34,123	3,261
Allegheny U of Hlth Sci	48,790	0	0	0	0	48,790	0	0	0
Bryn Mawr College	3,432	0	564	163	139	218	459	1,889	0
Carnegie Mellon U	136,514	32,827	8,065	2,164	64,794	13,949	5,291	6,163	3,261
Drexel University	19,322	12,650	1,322	1,029	1,375	621	0	2,325	0
Duquesne University	861	0	77	0	1	719	6	58	0
Lehigh University	34,780	27,915	4,101	1,168	450	913	117	116	0
Phila Col Osteopathic Med	869	0	0	0	0	869	0	0	0
Phila Col of Phar & Sci	695	0	0	0	0	695	0	0	0
Thomas Jefferson U	69,154	0	0	0	0	69,154	0	0	0
U of Pennsylvania	288,430	12,564	24,478	622	8,246	216,836	2,152	23,532	0
Villanova University	2,040	970	460	0	60	310	200	40	0
Widener U All Campuses	0	0	0	0	0	0	0	0	0
Rhode Island, total	107,266	14,384	9,772	27,629	10,766	31,674	5,623	6,816	602
Public, total	39,575	4,128	981	22,249	237	5,458	3,471	2,449	602
U of Rhode Island	39,575	4,128 i	981 i	22,249 i	237 i	5,458 i	3,471 i	2,449 i	602 i
Private, total	67,691	10,256	8,791	5,380	10,529	26,216	2,152	4,367	0
Brown University	67,621	10,249	8,791	5,341	10,529	26,204	2,140	4,367	0
Providence College	70	7	0	39	0	12	12	0	0
South Carolina, total	217,881	44,535	15,180	9,924	11,534	115,065	1,431	14,641	5,571
Public, total	217,881	44,535	15,180	9,924	11,534	115,065	1,431	14,641	5,571
Clemson University	84,836	26,066	5,212	1,220	3,692	40,820	12	6,886	928
Med U of South Carolina	54,426	0	0	0	0	54,426	0	0	0
U of South Carolina	78,619	18,469	9,968	8,704	7,842	19,819	1,419	7,755	4,643
South Dakota, total	25,440	2,697	2,946	3,497	24	13,722	7	2,100	447
Public, total	25,440	2,697	2,946	3,497	24	13,722	7	2,100	447
SD Sch of Mines & Tech	5,015	1,586	120	2,911	0	0	0	0	398
South Dakota State U	14,925	1,111	589	580	24	12,009	0	612	0
U of South Dakota	5,500	0	2,237	6	0	1,713	7	1,488	49
Tennessee, total	317,090	49,531	21,760	17,681	14,091	192,768	7,097	10,973	3,189
Public, total	188,875	40,628	13,852	16,747	13,264	88,715	4,644	7,836	3,189
East Tennessee State U	2,255	0	99	194	0	1,909	0	53	0
Middle Tennessee State U	535	5	242	5	25	46	65	147	0
Tennessee State U	9,137	2,318	1,527	82	684	4,526	0	0	0
Tennessee Tech U	9,188	7,755	482	1	34	907	0	9	0
The University of Memphis	18,429	3,106	299	3,379	704	2,233	4,353	2,858	1,497
U of Tennessee System	149,331	27,444	11,203	13,086	11,817	79,094	226	4,769	1,692
Private, total	128,215	8,903	7,908	934	827	104,053	2,453	3,137	0
Meharry Medical College	11,212	0	0	673	0	10,539	0	0	0
Vanderbilt University	117,003	8,903	7,908	261	827	93,514	2,453	3,137	0
Texas, total	1,513,143	256,277	113,813	123,123	53,987	890,089	13,828	47,346	14,680
Public, total	1,274,320	249,708	102,593	112,253	39,940	697,713	11,504	46,778	13,831
Lamar University	2,407	714	165	1,394	59	43	5	22	5
Sam Houston State U	5,490	0	708	4,173	200	187	48	174	0
Stephen F Austin St U	3,990	0	39	13	25	3,038	61	814	0
Texas A&M U-Commerce	263	0	78	9	1	170	0	5	0

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Texas, continued:									
Public, continued:									
Texas A&M University	366,983	97,848	22,552	71,841	7,378	143,595	1,592	18,540	3,637
Texas Tech University	43,000	10,294	4,571	896	1,694	22,260	65	3,056	164
Texas Woman's University	1,818	0	34	0	198	1,573	0	13	0
U North TX Health Sci Ctr	6,499	0	0	0	0	6,181	0	0	318
U TX Arlington	24,010	9,696	2,126	523	8,736	710	41	1,514	664
U TX Austin	241,606	101,222	50,515	26,030	13,100	22,176	4,347	17,198	7,018
U TX Dallas	13,562	724	6,513	1,888	815	2,170	650	751	51
U TX El Paso	13,548	3,651	1,264	3,382	820	1,871	596	1,964	0
U TX Hlth Sci Ctr San Ant	83,028	0	0	0	0	83,028	0	0	0
U TX MD Anderson Cncr	120,964	0	2,538	0	2,559	115,867	0	0	0
U TX Med Br Galveston	73,759	0	0	0	0	73,759	0	0	0
U TX SW Med Ctr Dallas	130,162	0	0	0	0	130,162	0	0	0
UT-Houston Hlth Sci Ctr	82,803	0	0	0	0	82,800	0	3	0
University of Houston	49,178	25,212	8,666	1,146	3,646	6,585	2,865	1,027	31
University of North Texas	11,250	347	2,824	958	709	1,538	1,234	1,697	1,943
Private, total	238,823	6,569	11,220	10,870	14,047	192,376	2,324	568	849
Baylor Col of Dentistry	1,363	0i	0i	0i	0i	1,363i	0i	0i	0i
Baylor Col of Medicine	184,613	0	0	0	0	184,613	0	0	0
Baylor University	1,251	0	580	122	26	294	0	0	229
Rice University	39,696	5,130	8,696	8,016	12,543	4,918	214	179	0
Southern Methodist U	9,050	1,395	1,314	2,682	1,449	1,113	162	378	557
Texas Christian U	2,787	44	630	50	29	75	1,948	11	0
University of Dallas	63	0i	0i	0i	0i	0i	0i	0i	63i
Utah, total	210,519	50,392	17,113	16,965	12,340	99,687	2,333	4,742	6,947
Public, total	196,132	42,701	14,982	16,810	11,819	97,219	2,119	3,535	6,947
University of Utah	114,423	18,482	9,512	3,820	10,677	70,658	953	321	0
Utah State University	81,709	24,219	5,470	12,990	1,142	26,561	1,166	3,214	6,947
Private, total	14,387	7,691	2,131	155	521	2,468	214	1,207	0
Brigham Young University	14,387e	7,691e	2,131e	155e	521e	2,468e	214e	1,207e	0e
Vermont, total	53,659	2,091	981	285	285	46,766	395	91	2,765
Public, total	53,659	2,091	981	285	285	46,766	395	91	2,765
University of Vermont	53,659	2,091	981	285	285	46,766	395	91	2,765
Virginia, total	448,041	77,435	37,471	59,030	15,878	231,285	7,893	18,588	461
Public, total	423,676	74,655	35,173	58,880	14,571	213,455	7,893	18,588	461
Col of William & Mary	25,183	0	5,105	16,700	808	827	183	1,560	0
George Mason University	23,230	7,391	2,416	254	2,963	2,043	1,624	6,539	0
Old Dominion University	17,577	6,267	2,540	5,559	1,301	1,584	48	278	0
University of Virginia	134,853	21,097	12,161	4,581	4,595	84,561	2,706	4,691	461
VA Polytech Inst & St U	143,815	39,562	9,342	31,786	4,333	52,424	2,191	4,177	0
Virginia Commonwealth U	79,018	338	3,609	0	571	72,016	1,141	1,343	0
Private, total	24,365	2,780	2,298	150	1,307	17,830	0	0	0
Eastern VA Med School	17,730	0	0	0	0	17,730	0	0	0
Hampton University	3,854	951	1,715	150	938	100	0	0	0
Institute of Textile Tech	2,781	1,829	583	0	369	0	0	0	0
Washington, total	505,113	42,363	24,954	58,921	8,741	326,053	8,613	25,638	9,830
Public, total	505,113	42,363	24,954	58,921	8,741	326,053	8,613	25,638	9,830
U of Washington	406,472	31,787	20,099	58,398	8,341	266,595	8,305	12,947	0
Washington State U	98,641	10,576	4,855	523	400	59,458	308	12,691	9,830
West Virginia, total	55,206	13,042	1,472	6,879	4,292	25,670	29	1,660	2,162
Public, total	55,206	13,042	1,472	6,879	4,292	25,670	29	1,660	2,162
Marshall University	234	0	0	0	0	234	0	0	0
WV Sch of Osteo Med	128	0	0	0	0	128	0	0	0
West Virginia University	54,844	13,042	1,472	6,879	4,292	25,308	29	1,660	2,162

See explanatory information and SOURCE at end of table.

Table B-31. R&D expenditures at doctorate-granting institutions, by State, control, and science and engineering field: fiscal year 1996

[Dollars in thousands]

State, control, and institution	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Wisconsin, total	485,560	59,547	42,006	27,209	10,490	293,440	15,330	35,806	1,732
Public, total	432,249	56,685	41,496	27,209	10,276	244,031	15,330	35,490	1,732
U WI Madison	412,570	53,094	38,439	23,908	9,740	241,824	14,989	29,744	832
U WI Milwaukee	19,679	3,591	3,057	3,301	536	2,207	341	5,746	900
Private, total	53,311	2,862	510	0	214	49,409	0	316	0
Marquette University	5,946	2,862i	510i	0i	214i	2,044i	0i	316i	0i
Medical Col of Wisconsin	47,365	0	0	0	0	47,365	0	0	0
Wyoming, total	40,553	3,690	3,470	8,640	1,021	17,625	252	476	5,379
Public, total	40,553	3,690	3,470	8,640	1,021	17,625	252	476	5,379
University of Wyoming	40,553	3,690	3,470	8,640	1,021	17,625	252	476	5,379
Puerto Rico, total	72,719	4,678	3,079	4,707	507	57,269	750	1,729	0
Public, total	65,623	4,678	3,079	4,707	507	50,191	750	1,711	0
U PR Mayaguez	44,502	4,474	1,133	4,707	377	33,724	0	87	0
U PR Med Sci Campus	15,005	0	0	0	0	15,005	0	0	0
U PR Rio Piedras	6,116	204	1,946	0	130	1,462	750	1,624	0
Private, total	7,096	0	0	0	0	7,078	0	18	0
Ponce School of Medicine	4,450	0	0	0	0	4,450	0	0	0
Pont Catholic U of PR	20e	0	0	0	0	20e	0	0	0
U Ctrl Del Caribe Esc Med	2,626	0	0	0	0	2,608	0	18	0

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
e = estimated
i = imputed

SOURCE: National Science Foundation, SRS, Survey of Research and Development Expenditures at Universities and Colleges.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-95

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
Total, all institutions	22,995,463	22,207,253	21,050,664	19,948,348	18,816,086	17,584,017	16,285,322	14,976,204
1 Johns Hopkins Univ[1]	798,468	788,687	784,043	745,515	735,542	710,095	668,915	648,395
2 University of Michigan	468,876	443,070	430,778	425,868	393,059	363,582	310,578	280,905
3 U WI Madison	412,570	403,541	392,718	372,362	352,706	326,489	309,841	285,982
4 U of Washington	406,472	389,160	353,945	335,329	313,514	274,423	245,313	221,712
5 MA Institute of Tech[2]	380,612	370,800	374,768	377,413	333,908	323,535	311,767	287,157
6 U CA San Diego	371,509	357,333	331,901	307,051	282,114	261,422	237,032	216,991
7 Texas A&M University	366,983	362,539	355,750	322,691	305,390	288,005	272,800	250,706
8 U CA Los Angeles	354,645	303,668	279,869	277,974	270,954	250,033	246,795	227,828
9 University of Minnesota	341,179	336,524	317,865	332,033	317,026	331,471	292,046	258,614
10 Cornell University[2]	339,534	343,786	312,683	310,949	299,342	309,535	300,144	286,733
Total, 1st 10 institutions	4,240,848	4,099,108	3,934,320	3,807,185	3,603,555	3,438,590	3,195,231	2,965,023
11 Pennsylvania State U	337,938	330,881	302,997	282,659	278,305	267,816	256,926	219,930
12 Stanford University	324,821	318,871	318,561	306,676	367,980	314,941	299,511	285,994
13 U CA San Francisco	320,757	329,742	312,393	314,599	295,784	268,700	238,278	219,446
14 U CA Berkeley[2]	316,320	291,200	289,632	284,346	284,545	258,038	231,061	209,967
15 U of Pennsylvania	288,430	272,393	251,461	233,829	222,424	198,221	189,390	173,744
16 Harvard University	282,443	276,422	278,459e	257,207	253,126	229,939	220,812	209,519
17 University of Arizona	279,656	292,351	269,939	235,528	221,999	213,726	195,633	174,119
18 U of Illinois Urbana	267,008	246,174	245,407	252,811	251,970	243,380	225,634	210,590
19 Ohio State University	262,147	246,287	230,515	221,460	203,291	194,919	178,569	173,485
20 U CA Davis	254,604	244,116	230,147	223,758	209,282	200,664	198,075	180,297
Total, 1st 20 institutions	7,174,972	6,947,545	6,663,831	6,420,058	6,192,261	5,828,934	5,429,120	5,022,114
21 University of Colorado	251,301	243,932	234,267	193,217	176,266	160,526	154,723	143,720
22 U of Southern California	244,258	222,159	207,275	200,822	194,740	175,595	169,102	162,013
23 Duke University	242,235	218,703	220,220	202,434	188,678	164,232	140,708	131,090
24 U TX Austin	241,606	228,676	260,602	249,158	228,545	237,043	228,203	193,337
25 Columbia University	236,403	244,991	236,417	204,710	199,516	194,666	182,769	172,145
26 Yale University	234,901	231,819	224,939	226,850	211,569	193,893	180,706	171,139
27 Georgia Institute of Tech	225,633	211,875	193,630	175,873	180,263	176,729	168,193	174,664
28 Washington University	218,640	209,100	192,378	179,329	170,339	160,464	151,249	128,419
29 U MD College Park	216,957	209,945	198,348	229,344	219,041	206,432	166,022	149,510
30 University of Florida	213,099	199,216	148,592	142,966	140,189	140,257	139,678	125,770
Total, 1st 30 institutions	9,500,005	9,167,961	8,780,499	8,424,761	8,101,407	7,638,771	7,110,473	6,573,921
31 University of Georgia	209,357	206,256	187,849	172,274	165,279	162,992	156,742	145,953
32 U of NC Chapel Hill	208,529	209,118	201,622	179,157	161,549	142,681	123,113	122,097
33 Purdue University	206,951	203,419	172,733	149,032	140,260	136,325	130,379	124,323
34 Louisiana St U. All Camp	196,328	186,723	165,857	158,823	151,844	147,626	135,849	122,357
35 NC State U Raleigh	190,748	180,191	173,407	155,624	143,008	142,606	131,133	123,441
36 University of Pittsburgh	189,826	186,457	185,377	178,778	157,250	130,322	117,716	111,265
37 Northwestern University	187,262	173,731	169,949	162,299	141,975	144,809	133,151	118,991
38 Rutgers the State U NJ	185,103	192,263	173,211	161,025	162,089	151,335	137,985	124,574
39 Baylor Col of Medicine	184,613	190,375	186,865	172,252	167,998	161,084	155,122	134,681
40 Michigan State University	182,589	182,009	163,285	150,861	142,308	133,249	126,987	121,456
Total, 1st 40 institutions	11,441,311	11,078,503	10,560,654	10,064,886	9,634,967	9,091,800	8,458,650	7,823,059
41 U of Iowa	178,228	164,893	157,036	148,811	135,418	124,058	115,778	105,900
42 U of Alabama Birmingham	170,193	158,779	141,735	133,790	117,844	113,317	110,603	100,666
43 California Inst of Tech[2]	157,005	138,016	127,946	115,439	111,733	115,526	105,730	98,731
44 Indiana University	154,948	145,512	136,617	127,877	117,565	102,461	89,191	81,793
45 Iowa State University[2]	151,914	154,932	155,982	148,459	132,580	134,657	116,270	103,241
46 U of Tennessee System	149,331	151,316	153,340	143,662	131,240	128,418	116,644	113,187
47 Emory University	149,168	148,178	136,186	120,125	101,398	91,940	82,774	64,713
48 University of Connecticut	147,522	139,956	136,740	133,054	124,010	123,794	117,932	109,328
49 New York University	145,874	148,935	139,202	129,774	122,399	112,106	108,511	104,451
50 University of Rochester[2]	144,914	158,539	167,485	161,810	139,992	131,777	129,011	123,997
Total, 1st 50 institutions	12,990,408	12,587,559	12,012,923	11,427,687	10,869,146	10,269,854	9,551,094	8,829,066

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
51 VA Polytech Inst & St U	143,815	148,501	148,313	135,771	130,994	125,256	121,423	104,266
52 Case Western Reserve U	143,435	141,089	133,272	124,691	118,391	104,199	93,384	86,168
53 SUNY Buffalo	137,701	143,768	141,092	128,203	128,428	113,441	109,190	100,291
54 University of Chicago[2]	137,679	126,261	121,902	111,877	118,123	113,289	117,955	109,429
55 Carnegie Mellon U[2]	136,514	125,659	122,580	118,261	110,571	103,030	100,201	101,635
56 University of Virginia	134,853	136,679	129,504	115,786	110,103	96,733	96,815	81,281
57 Oregon State University	131,334	123,402	119,772	114,004	107,573	96,199	90,688	91,355
58 U TX SW Med Ctr Dallas	130,162	125,301	118,398	114,258	102,263	94,511	85,919	79,920
59 University of Miami	130,056	128,736	121,475	120,875	104,165	96,979	94,344	90,298
60 Colorado State University	126,701	122,172	112,457	115,385	107,339	80,474	73,967	64,351
Total, 1st 60 institutions	14,342,658	13,909,127	13,281,688	12,626,798	12,007,096	11,293,965	10,534,980	9,738,060
61 SUNY Stony Brook	126,377	122,611	113,251	107,817	98,906	90,790	82,236	79,455
62 U of Missouri Columbia	123,133	122,870	121,256	106,193	97,242	96,748	88,181	74,055
63 U of MD Baltimore	122,207	107,874	110,866	111,772	100,312	100,163	83,689	75,854
64 University of IL Chicago	121,540	119,381	113,741	106,952	102,267	90,520	85,268	83,329
65 U TX MD Anderson Cncr	120,964	122,181	122,357	127,475	112,121	108,988	91,283	85,903
66 U CA Irvine	119,647	109,908	104,778	100,631	89,275	82,523	78,074	66,806
67 University of Kentucky	118,721	111,934	105,539	102,911	92,244	81,137	74,959	69,532
68 Vanderbilt University	117,003	111,224	110,105	96,181	95,447	80,759	75,062	65,218
69 University of New Mexico	116,618	129,354	90,315	76,736	72,863	67,344	57,728	52,970
70 University of Utah	114,423	105,642	103,771	105,263	108,486	94,621	89,018	83,340
Total, 1st 70 institutions	15,543,291	15,072,106	14,377,667	13,668,729	12,976,259	12,187,558	11,340,478	10,474,522
71 Georgetown University	112,582	102,421	82,661	73,785	64,937	60,454	50,867	53,597
72 Princeton University[2]	112,380	104,157	99,287	95,561	93,958	92,002	91,514	82,914
73 Wayne State University	112,151	106,140	94,632	85,627	81,127	69,997	62,455	59,521
74 Boston University	110,267	103,709	90,504	91,158	83,701	74,881	73,651	66,325
75 University of Oklahoma	109,071	102,337	95,747	92,019	92,146	79,777	58,645	53,956
76 The Rockefeller Univ	105,595	99,348	74,458	74,396	75,102	74,090	75,245	73,945
77 U of Nebraska Lincoln	102,460	107,721	102,746	94,959	91,427	87,529	77,598	68,281
78 University of Kansas	100,649	100,702	95,701	85,134	75,004	65,982	61,144	57,111
79 Washington State U	98,641	96,810	94,819	92,434	85,080	75,244	66,856	55,173
80 U Med & Dent NJ	98,535	96,365	86,866	76,410	84,505	80,787	71,789	54,451
Total, 1st 80 institutions	16,605,622	16,091,816	15,295,088	14,530,212	13,803,246	12,948,301	12,030,242	11,099,796
81 U of South Florida	94,157	92,758	86,186	75,322	68,713	72,948	76,404	60,973
82 CUNY Mt Sinai Sch Med	92,405	92,008	86,179	75,337	75,561	66,310	63,752	56,856
83 Yeshiva University	91,430	94,739e	92,881	89,636	87,196	86,721	83,968	74,496
84 U CA Santa Barbara	91,284	78,737	73,619	68,775	66,007	59,593	59,750	50,067
85 University of Cincinnati	89,286	91,159	93,599	92,512	90,279	80,598	74,461	69,831
86 Auburn University	87,358	85,566	84,769	68,151	66,773	69,913	66,795	53,814
87 Clemson University	84,836	82,883	76,572	78,569	77,579	70,236	66,664	56,699
88 Arizona State University	84,653	77,009	62,563	66,142	69,346	63,489	59,849	44,347
89 Mississippi State U	84,124	72,145	76,201	70,300	65,754	64,335	58,492	53,670
90 Tulane University	83,660	100,231	83,885	75,634	72,190	71,781	56,407	45,195
Total, 1st 90 institutions	17,488,815	16,959,051	16,111,542	15,290,590	14,542,644	13,654,225	12,696,784	11,665,744
91 U TX Hlth Sci Ctr San Ant	83,028	87,336	83,535	75,239	65,179	51,768	45,663	42,501
92 Oklahoma State University	82,960	75,906	70,808	72,920	71,238	67,492	65,685	53,655
93 UT-Houston Hlth Sci Ctr	82,803	74,664	66,432	58,786	55,262	53,896	45,707	46,860
94 Utah State University	81,709	82,468	79,085	75,835	89,776	94,167	86,450	69,944
95 Oregon Health Sciences U	80,333	74,726	63,875	56,860	49,313	41,661	41,420	35,097
96 Tufts University	79,356	77,093	73,749	68,519e	60,891e	47,748	47,009	50,424
97 Virginia Commonwealth U	79,018	76,529	76,597	77,097	69,189	65,608	62,730	52,193
98 U of South Carolina	78,619	79,710	74,001	57,062	54,360	55,091	47,477	40,421
99 Florida State University	78,125	86,060	76,588	62,929	50,178	53,811	62,933	55,245
100 New Mexico State Univ	76,493	81,455	80,286	85,974	83,900	78,736	71,288	60,930
Total, 1st 100 institutions	18,291,259	17,754,998	16,856,498	15,981,811	15,191,930	14,264,203	13,273,146	12,173,014

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
101 Wake Forest University	75,331	68,388	52,581	57,646	49,919	44,214	39,654	37,156
102 U TX Med Br Galveston	73,759	72,569	72,773	67,998	57,672	45,086	40,610	38,717
103 U MA Amherst	73,678	66,082	65,344	64,111	62,990	..	..	..
104 Univ of Hawaii Manoa	73,302	78,429	70,079	73,961	80,258	78,166	76,525	70,733
105 Woods Hole Oceanograph	73,015	80,235	81,345	81,519	82,845	76,979e	71,747	74,881
106 U CA Riverside	71,495	62,539	60,995	59,065	57,536	57,244	54,892	53,213
107 U of Alaska Fairbanks	71,381	72,216	76,093	66,796	67,881	67,432	65,571	56,701
108 Kansas State University	71,222	71,103	65,696	62,562	57,723	53,010	50,311	47,302
109 Thomas Jefferson U	69,154	65,705	56,932	51,106	41,329	33,066	30,969	29,405
110 Brown University	67,621	56,269	55,146	57,152	55,585	49,503	46,763	43,564
Total, 1st 110 institutions	19,011,217	18,448,533	17,513,482	16,623,727	15,805,668	14,768,903	13,750,188	12,624,686
111 SUNY Albany	66,247	38,771	43,353	37,860	35,856	20,580	22,034	24,240
112 U MA Worcester	63,341	62,441	61,790	60,602	53,342	..	..	..
113 U Arkansas Main	59,753	59,410	57,815	58,325	44,768	40,831	36,963	32,842
114 Temple University	56,533	54,742	56,308	53,686	53,921	54,921	49,449	45,482
115 University of Idaho	56,198	52,529	49,338	44,655	44,140	39,407	34,936	31,879
116 West Virginia University	54,844	53,072	58,604	54,271	52,482	49,686	46,624	37,569
117 Med U of South Carolina	54,426	57,495	46,249	42,543	31,900	25,877	23,128	23,017
118 University of Delaware	54,154	53,161	50,734	52,627	48,970	44,696	40,119	37,194
119 University of Vermont	53,659	54,065	51,775	49,839	49,542	46,541	45,162	42,743
120 Dartmouth College	52,945	50,525	57,845	59,920	53,668	49,384	43,737	38,452
Total, 1st 120 institutions	19,583,317	18,984,744	18,047,293	17,138,055	16,274,257	15,140,826	14,092,340	12,938,104
121 U CA Santa Cruz	51,062	44,294	42,457	37,886	36,413	31,620	26,347	23,651
122 Montana St U Bozeman	50,097	47,998	36,149	32,911	34,419	30,278	27,648	25,968
123 George Washington U	49,263	43,488	38,429	41,177	39,335	29,791	32,372	30,284
124 University of Houston	49,178	44,993	43,131	55,038	44,957	42,292	37,978	34,229
125 Allegheny U of Hlth Sci	48,790	41,237	45,218	42,752	44,038	37,814	32,238	31,700
126 Rush University	48,772	44,322	39,736	34,039	26,184	27,359	21,284	21,741
127 U of Nevada Reno	47,977	46,783	42,176	38,564	37,546	29,303	21,449	18,141
128 Medical Col of Wisconsin	47,365	44,169	49,604	48,689	43,579	40,446	34,622	34,951
129 U of New Hampshire	45,693	42,548	43,707	39,555	33,744	29,591	25,994	23,720
130 U PR Mayaguez	44,502	40,393	22,967	23,156	25,238	27,897i	30,555	29,343
Total, 1st 130 institutions	20,066,016	19,424,969	18,450,867	17,531,822	16,639,710	15,467,217	14,382,827	13,211,832
131 North Dakota State U	43,661	40,677	36,977	34,971	34,466	31,935	12,468	10,433
132 San Diego St University	43,201	35,287	29,309	32,493	30,683	28,570	22,524	20,124
133 University of Dayton	43,188	46,084	47,768	45,052	41,009	37,926	36,177	31,984
134 Texas Tech University	43,000	40,824	39,455	38,119	36,869	34,994	34,124	33,926
135 U of NE Med Ctr Omaha	42,612	38,287	33,997	31,669	31,564	27,858	17,844	17,291
136 Loyola U of Chicago	42,565	39,697i	36,830	29,232	30,099	22,702	12,260	11,303
137 University of Wyoming	40,553	40,470	38,464	32,556	30,181	23,009	22,831	23,310
138 Rice University	39,696	34,446	33,309	30,403	29,424	30,577	26,267	21,563
139 U of Rhode Island	39,575	43,103i	46,631	45,942	40,842e	38,842	35,846	36,219e
140 NJ Inst of Technology	39,110	30,940	29,983	23,781	21,126	16,463	15,225	11,402
Total, 1st 140 institutions	20,483,177	19,814,784	18,823,590	17,876,040	16,965,973	15,760,092	14,618,393	13,429,387
141 U of Alabama Huntsville	38,176	36,736	31,482	34,153	32,017	28,897	29,565	26,186
142 Rensselaer Polytech Inst	37,917	37,247	37,191	44,132	50,769	50,106	46,880	38,805
143 Unif Svcs U of Hlth Sci	36,851	39,612	27,334	30,846	27,875i	24,904i	21,933i	18,962i
144 Brandeis University	36,760	36,451	34,835	36,213	35,229	33,837	30,881	30,596
145 Medical Col of Georgia	35,971	31,369	28,020	24,935	21,426	12,082	12,052	11,363
146 Lehigh University	34,780	35,117	29,188	30,869	31,822	27,912	27,255	26,004
147 U of Maine	34,684	31,901	29,393	24,879	23,213	27,082	23,605	19,974
148 Clark Atlanta University	34,566	25,245	12,709	12,057	11,483	8,655	7,896i	7,137i
149 Syracuse University	34,322	33,939	38,650	32,443	32,145	30,606	33,811	35,543
150 University of Oregon	33,654	30,386	31,170	30,738	30,242	26,151	26,346	22,476
Total, 1st 150 institutions	20,840,858	20,152,787	19,123,562	18,177,305	17,262,194	16,030,324	14,878,617	13,666,433

See explanatory information and SOURCE at end of tabl

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
151 U Arkansas Medical Sci	33,354	28,389	22,762	15,686	15,889	14,250	11,898	10,834
152 SUNY Hlth Sci Ctr Brklyn	31,920	30,781	27,773	27,645	24,171	32,824	22,873	20,523
153 US Naval Postgrad School	30,706	27,510	26,538	24,296	20,412	19,397	17,391	15,306
154 University of Louisville	29,655	22,835	20,475	19,496	17,400	16,852	15,921	14,466
155 Howard University	28,894	24,819	19,836	18,427	17,576	15,731	17,382	17,125
156 Sthrn IL U Carbondale	28,578	29,631	30,497	26,376	28,094	28,340	25,873	23,357
157 Univ of North Dakota	28,188	18,940	18,732	19,204	18,265	16,995	17,498	17,518
158 U Mississippi, All Camp	26,215	26,862	25,000	23,734	23,361	24,748	22,071	17,092
159 Col of William & Mary	25,183	20,597	20,443	21,793	18,890	18,508	17,792	15,394
160 Saint Louis University	25,099	22,686	20,844	20,826	19,932	19,183	17,157	14,251
Total, 1st 160 institutions	21,128,650	20,405,837	19,356,462	18,394,788	17,466,184	16,237,152	15,064,473	13,832,299
161 University of Notre Dame	24,556	23,332	22,833	23,745	22,679	21,302	19,373	19,385
162 U TX Arlington	24,010	21,135	17,453	14,834	13,896	12,887	5,729	7,064
163 Michigan Tech University	23,882	22,798	21,786	18,696	18,179	19,667	16,037	15,186
164 George Mason University	23,230	22,221	18,871	15,830	11,930	9,726	8,011	4,220
165 U MD Biotechnology Inst	22,933	18,062	14,839	--	--	--	--	--
166 Florida A&M University	22,474	20,797	24,691	22,777	22,230	18,552	15,847	14,171
167 CUNY City College	22,166	22,695	18,831	20,401	16,454	15,451	12,973	11,724
168 SUNY Col Env Sci Frstry	21,969	21,904	21,839	21,856	18,456	19,049	18,671	17,221
169 The University of Alabama	21,806	23,479	21,960	23,149	22,573	21,248	21,488	18,395
170 U of Central Florida	21,488	37,147	33,599	33,922	27,629	41,935	30,618	30,991
Total, 1st 170 institutions	21,357,164	20,639,407	19,573,164	18,589,998	17,640,210	16,416,969	15,213,220	13,970,656
171 U MD Center for EES	21,448	21,100	19,817	19,055	18,557	16,205	15,652	13,741
172 The University of Montana	21,421	18,881	16,908	15,169	10,177	7,871	7,332	6,482
173 Oregon Grad Inst Sci Tech	21,412	22,141	20,859	18,288	12,332	11,160	9,262	8,825
174 U of Missouri Rolla	20,652	21,220	19,706	18,025	15,619	14,432	14,285	17,692
175 NM Inst Mining & Tech	20,580	19,584	20,945	24,040	25,208	24,059	22,911	22,289
176 Desert Research Institute	20,100	22,851	21,459	21,187	20,579	17,948	16,852	16,005
177 U WI Milwaukee	19,679	19,684	19,180	18,245	18,567	16,865	15,639	13,428
178 Drexel University	19,322	19,389	20,886	20,314	23,184	19,705	20,079	17,983
179 Colorado School of Mines	19,291	16,585	13,880	13,644	12,783	12,971	10,943	9,364
180 SUNY Binghamton	18,500	17,106	15,803	13,760	12,843	9,870	10,680	9,270
Total, 1st 180 institutions	21,559,569	20,837,948	19,762,607	18,771,725	17,810,059	16,568,055	15,356,855	14,105,735
181 The University of Memphis	18,429	14,642	13,305	11,740	12,169	12,000	12,073	9,892
182 Ohio University	18,329	19,713	16,425	15,452	14,811	12,796	12,982	11,461
183 Georgia State University	18,114	17,867	17,100	12,133	10,026	9,271	8,942	7,000
184 Northeastern University	17,980	19,850	19,104	18,517	15,876	15,973	14,347	13,302
185 U MA Lowell	17,834	15,505	15,155	14,292	14,880	12,403	11,291	11,242
186 Eastern VA Med School	17,730	17,823	17,873	15,818	11,238	11,112	10,496	8,125
187 Old Dominion University	17,577	14,439	14,911	14,097	10,859	10,040	10,478	9,107
188 Wright State University	17,381	18,661	19,388	19,791	16,793	14,646	13,451	11,043
189 U of Nevada Las Vegas	16,893	17,268	15,486	19,373	13,300	19,491	15,449	11,409
190 Florida International U	16,856	16,375	13,520	11,443	--	--	--	--
Total, 1st 190 institutions	21,736,692	21,010,091	19,924,874	18,924,381	17,930,011	16,685,787	15,466,364	14,198,316
191 C R Drew U of Med & Sci	16,386	12,500	9,347	6,852	7,862	7,043	4,970	2,898
192 New York Medical College	16,372	18,424	18,725	18,491	16,799	14,633	13,244	12,958
193 Illinois Inst of Tech	16,000	11,923	8,853	8,252	6,293	7,128	6,793	6,864
194 NC A&T State University	15,991	15,774	13,637	12,090	11,914	10,427	8,657	6,706
195 University of Akron	15,507	15,589	16,783	17,558	14,825	13,405	10,372	9,728
196 Stevens Inst of Tech	15,249	13,766	13,460	14,004	14,580	8,303	6,146	4,973
197 CUNY Hunter College	15,021	12,421	12,264	10,381	8,939	8,075	6,928	6,526
198 U PR Med Sci Campus	15,005	17,354	17,765	14,622	18,296	11,014	6,293	6,528
199 South Dakota State U	14,925	13,448	14,083	14,050	12,692	11,511	9,511	8,472
200 U of South Alabama	14,873	13,426	13,917	12,650	12,277	12,924	11,105	10,503
Total, 1st 200 institutions	21,892,021	21,154,716	20,063,708	19,053,331	18,054,488	16,790,250	15,550,383	14,274,472

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
201 Boston College	14,504	13,298	10,724	10,731	10,400	9,810	8,052	6,152
202 Brigham Young University	14,387e	14,102	13,859	13,587	14,469	12,682	11,608	11,544
203 U MD Baltimore County	14,304	11,868	8,117	7,544	7,619	6,809	5,385	4,342
204 SUNY Hlth Sci Ctr Syrcse	14,093	13,177	11,751	12,453	12,992	14,564	14,401	31,125
205 Mercer University	13,641	11,181	14,201	13,771	10,354	8,172	4,656	3,043
206 U TX Dallas	13,562	14,027i	14,492	13,371	12,995	10,571	12,075	11,265
207 U TX El Paso	13,548	12,705	12,062	12,480	10,147	9,447	6,889	4,168
208 Western Illinois U	13,517	14,009	13,780	14,448	11,800i	9,155i	6,510i	3,865i
209 U of Southwestern LA	13,429	13,416	11,099	11,319	10,815	10,232	8,319	6,817
210 Med Col of Ohio Toledo	13,367	13,008	12,471	12,285	10,905	9,353	7,159	6,809
Total, 1st 210 institutions	22,030,373	21,285,507	20,186,264	19,175,320	18,166,984	16,891,045	15,635,437	14,363,602
211 Morehouse School of Med	13,206	7,896	7,522	7,448	7,106	6,291	5,891	4,320
212 U of Missouri Kansas City	12,803	11,727	11,420	10,976	9,889	8,300	8,310	7,926
213 Northern Illinois U	11,674	12,600	11,445	11,215	10,708	10,074	8,930	7,304
214 Creighton University	11,641	11,036	9,645	9,109	8,047	8,324	8,929	7,934
215 Northern Arizona U	11,572	10,856	10,290	9,051	8,388	6,913	5,902	5,368
216 Kent State University	11,497	10,802	11,312	12,075	11,655	8,469	7,172	5,534
217 University of North Texas	11,250	10,616	10,110	9,026	10,701	10,580	9,741	9,121
218 Meharry Medical College	11,212	10,738	10,336	9,283	7,258	7,249	6,663	6,564
219 Polytechnic University	10,964	10,897	11,869	9,424	9,273	9,272	10,919	11,345
220 U MA Boston	10,898	9,146	10,962	9,745	7,974	--	--	--
Total, 1st 220 institutions	22,147,090	21,391,821	20,291,175	19,272,672	18,257,983	16,966,517	15,707,894	14,429,018
221 Cleveland State U	10,884i	10,496	10,570	9,803	10,939	10,205	8,699	7,570
222 Loma Linda University	10,837	9,270	9,204	9,030	8,028	6,191	7,547	5,248
223 Southern U A&M All Camp	10,748	9,639	6,512	6,837	6,813	5,942	5,278i	4,615
224 Prairie View A&M U	10,621	8,019	8,306	5,931	6,098	3,623	3,521	3,680
225 Florida Atlantic U	10,576	13,776	11,236	11,331	8,021	5,600	4,985	3,469
226 Inst Paper Sci and Tech	9,939i	9,640	8,995	8,344	7,474	7,887	5,761	6,231
227 Wichita State University	9,904	9,691	7,483	6,407	6,285	5,182	3,196	3,443
228 Western Michigan U	9,823	9,033	9,145	8,630	6,199	6,011	4,257	3,103i
229 Alabama A&M University	9,765i	9,417	11,098	9,316	7,053	6,699	7,010	6,272
230 University of Tulsa	9,565	8,107	7,945	7,889	5,961	5,318	4,325	3,329
Total, 1st 230 institutions	22,249,752	21,488,909	20,381,669	19,356,190	18,330,854	17,029,175	15,762,473	14,475,978
231 Worcester Polytech Inst	9,407	11,611	11,602	11,484	8,925	5,889	4,683	4,208
232 Portland State University	9,376	7,920	7,146	5,860	4,433	4,169	3,834	3,374
233 Tennessee Tech U	9,188	10,184	9,357	9,478	9,872	9,888	9,631	7,539
234 Tennessee State U	9,137	7,431	6,916	5,252	4,475	3,709	3,300	3,442
235 U Southern Mississippi	9,112	8,827	8,413	7,334	5,375	7,388	4,666	4,413
236 Tuskegee University	9,061	7,446	7,121	5,500	4,800	4,426	5,089	5,348
237 Southern Methodist U	9,050	7,595	8,277	7,037	7,722	8,607	13,600e	9,363
238 Miami University (OH)	8,847	7,137	6,731	4,919	3,972	3,087	2,203	2,364
239 Idaho State University	8,732	6,092	6,052	4,119	2,756	2,030	1,634	1,312
240 University of Denver	8,728	11,091	6,671	8,595	8,284	6,484	10,102	8,938
Total, 1st 240 institutions	22,340,390	21,574,243	20,459,955	19,425,768	18,391,468	17,084,852	15,821,215	14,526,279
241 Clarkson University	8,264	9,314	10,412	10,586	9,518	9,125	8,392	7,523
242 University of Toledo	8,180e	7,436	8,043	8,441	7,287	6,743	5,551	4,599
243 Rochester Inst of Tech	8,118	6,370	11,528	6,331	5,343i	4,357i	3,371i	2,385i
244 Florida Inst of Tech	8,013	7,973	4,384	5,866	5,924	6,305	7,003	3,531
245 Albany Medical College	7,888	14,981	10,324	11,845	9,681	10,131	9,431	9,827
246 U of Missouri St Louis	7,706	7,503	6,664	4,681	4,304	2,468	2,291	2,439
247 Catholic U of America	7,427	7,670	7,542	7,926	7,346	7,365	7,398	6,554
248 Finch U Hlth Sci Chicago	7,022	6,692	7,057	6,928	5,899	4,908	4,695	4,535
249 Oakland University	6,832	7,168	6,285	6,096	5,804	5,912	4,102	4,673
250 East Carolina University	6,817	7,772	8,245	7,360	6,067	6,119	6,098	5,241
Total, 1st 250 institutions	22,416,657	21,657,122	20,540,439	19,501,828	18,458,641	17,148,285	15,879,547	14,577,586

See explanatory information and SOURCE at end of table.

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Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
251 U North TX Health Sci Ctr	6,499	5,381	5,475	5,718	3,920	3,504	2,767	3,630
252 Northeast Louisiana U	6,134	5,409	5,282	2,644	2,401	904	1,138	439
253 U PR Rio Piedras	6,116	5,554	5,434	5,502	4,518	5,058	5,374	4,017
254 Marquette University	5,946	5,588	5,322	4,896	4,256	3,821	3,262	2,454
255 Air Force Inst of Tech	5,877	5,960	7,057	3,252	3,813	2,243	2,200	1,800i
256 CA St U Long Beach	5,843	5,676i	5,509i	5,342i	5,175i	5,008i	4,841i	4,674i
257 U TX San Antonio	5,538	4,760i	3,982	3,286	--	--	--	--
258 U of South Dakota	5,500	3,149	2,879	3,996	1,851	1,598	1,831	1,381
259 Sam Houston State U	5,490	3,905i	2,321	1,380	1,072	1,238	380	219
260 Wesleyan University	5,245	5,093	5,112	4,804	4,095	3,248	4,021	3,943
Total, 1st 260 institutions	22,474,845	21,707,597	20,588,812	19,542,648	18,489,742	17,174,907	15,905,361	14,600,143
261 Jackson State University	5,224	4,960i	4,697	4,371	4,065	3,912	3,762	3,747
262 Xavier University of LA	5,188	10,048	4,176	3,169	2,379	2,424	1,902	1,294
263 SD Sch of Mines & Tech	5,015	4,795	4,718	4,150	3,693	2,850	3,000	2,596
264 Wellesley College	4,944	1,782	1,747	1,731i	1,718i	1,705i	1,692i	1,679i
265 U of the Virgin Islands	4,828	3,811i	2,794	6,189	5,753i	5,318i	4,883e	4,734
266 New Sch for Socl Res	4,718i	4,576i	4,383	1,559	1,572	1,164	1,026	1,000
267 Illinois State University	4,608	5,166	5,071	4,535	3,294	2,898	2,951	2,559
268 Ponce School of Medicine	4,450	3,418	3,102	2,591	1,715	1,372	943	856
269 Alfred University	4,217	4,667	4,712	4,479	4,117	3,911	4,067	3,874
270 U MA Dartmouth	4,092	3,709	3,134	2,340	1,941	--	--	--
Total, 1st 270 institutions	22,522,129	21,754,529	20,627,346	19,577,762	18,519,989	17,200,461	15,929,587	14,622,482
271 Stephen F Austin St U	3,990	3,392	2,820	1,771	1,490	1,178	1,390	1,417
272 Bowling Green State U	3,942	3,700	3,874	3,430	3,430	3,729	3,400	3,353
273 Hampton University	3,854	6,344	5,342	4,597	3,272	3,345	2,307	2,168
274 Morgan State University	3,852i	3,700i	3,558	1,496	1,223	701	657	649
275 Texas Southern U	3,820	4,173	2,612	4,220	2,329	2,101	1,546	1,519
276 Albany State University	3,687e	3,687i	3,687e	3,733	2,339	1,172	1,173	1,725
277 Morris Brown College	3,652	3,796	1,010	1,227	1,341e	887	647e	164
278 Bryn Mawr College	3,432	2,403	2,559	2,310	1,746	2,490	1,854	895
279 U Arkansas Pine Bluff	3,424	4,780	3,446	3,247	2,372	2,419	1,188	1,148
280 Alcorn State University	3,368	3,233i	3,099	3,129	2,517	2,041	1,935	1,850
Total, 1st 280 institutions	22,559,150	21,793,737	20,659,353	19,606,922	18,542,048	17,220,524	15,945,684	14,637,370
281 American University	3,279	3,063	3,226	3,903	4,330	5,057	4,127	3,765
282 Virginia State University	3,270	3,134	4,569	4,801	6,075	5,795	3,258	2,620
283 University of DC	3,244	3,227i	3,211	3,055i	2,900	2,865	2,569	2,271i
284 Boise State University	3,102	3,285	2,453	1,630	--	--	--	--
285 Louisiana Tech University	3,100	2,707i	2,315	3,582	3,985	2,759	3,894	3,930
286 South Carolina State U	3,000	4,091i	5,181	4,103	3,665	2,526	2,593	1,694i
287 Tarleton State University	2,987	2,535	2,760	2,839	1,396	998	309	38
288 CUNY Queens College	2,980	3,397	2,705	2,649	2,328	2,518	2,551	2,301
289 Lincoln University	2,970	2,934	3,121	2,958	3,194	3,027	2,771	2,901
290 CUNY Grad Sch & U Ctr	2,925i	2,821i	2,674	3,125	3,185	2,554	3,858	3,069
Total, 1st 290 institutions	22,590,007	21,824,931	20,691,568	19,639,567	18,573,106	17,248,623	15,971,614	14,659,959
291 CUNY Brooklyn College	2,800	2,436	1,783	2,181	2,311i	2,437i	2,563i	2,689i
292 Texas Christian U	2,787	2,783	3,110	3,170	3,128	2,859	1,823	888
293 Institute of Textile Tech	2,781	2,642	2,297	2,412	2,281	2,148	1,921	1,311
294 Kentucky State University	2,773	2,920	2,665	2,349	2,525	2,026	2,856	1,721
295 Fordham University	2,712	2,067	2,241	1,737	1,936	1,816	2,501	2,648
296 Ball State University	2,667	2,248	2,002	1,322	1,211	1,241	850	798
297 U Ctrl Del Caribe Esc Med	2,626	2,897	2,139	1,977	1,294	852	620	682
298 New Mexico Highlands U	2,585	2,035i	1,485	291	253i	216i	179i	142i
299 SUNY Col Buffalo	2,570	1,604	1,460	1,496	1,430	1,240	832	863i
300 U of Detroit Mercy	2,555	2,950	2,527	2,069	1,731	1,450	1,526	1,282
Total, 1st 300 institutions	22,616,863	21,849,513	20,713,277	19,658,571	18,591,206	17,264,908	15,987,285	14,672,983

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
301 Langston University	2,521	3,187	2,046	1,881	1,750	1,310	1,200	2,349
302 N.E. Ohio Univs Col Med	2,493	3,193	2,446	1,892	1,747	1,408	1,409	1,616
303 Fort Valley State U	2,474	3,009	2,648	2,749	2,711	2,370	2,313	2,173
304 Lamar University	2,407	2,189	3,052	3,269	2,964	2,898	2,121	779
305 Seton Hall University	2,400e	2,411e	3,072	2,895i	2,728i	2,561i	2,394i	2,227i
306 Hofstra University	2,290	2,218	1,786	1,073	211	493	515	366
307 East Tennessee State U	2,255	2,205	2,283	1,927	1,750	1,740	1,902	1,629
308 Norfolk State University	2,239	1,273	671	566	793	752	826	652
309 Delaware State University	2,071	1,036	3,987	1,262	1,387	1,330	1,027	1,027
310 Smith College	2,066i	2,004i	1,920	1,788i	1,658i	1,528i	1,398	1,774
Total, 1st 310 institutions	22,640,079	21,872,238	20,737,188	19,677,873	18,608,905	17,281,298	16,002,390	14,687,575
311 Villanova University	2,040	1,996	1,848	1,670	1,560	1,461	1,390	1,440
312 U of NC Greensboro	2,028	2,437	2,309	2,360	2,128	1,989	1,154	823
313 U MD Eastern Shore	1,980	1,880	1,128	3,045	3,640	1,620	1,850	2,944
314 Hampshire College	1,978i	1,978i	1,978	1,447	--	--	--	--
315 Fisk University	1,969	1,800i	1,631	1,502	1,317	641	1,156	1,157
316 Clark University	1,954	2,228	2,711	2,311	1,694	1,314	1,281	1,256
317 Santa Clara University	1,954i	1,895i	1,815e	1,815	2,103	1,579	1,569	1,396
318 U of Northern Iowa	1,944	2,165	1,404	1,079	687	559	357	156
319 St John's University (NY)	1,903	1,068	1,103	860	1,069	593	759	632
320 Texas Woman's University	1,818	1,712	1,458	1,380	1,394	1,359	1,336	969
Total, 1st 320 institutions	22,659,647	21,891,397	20,754,573	19,695,342	18,624,497	17,292,413	16,013,242	14,698,348
321 Grand Valley State U	1,810	727	736	830	730	611	570	465
322 Central State University	1,786	1,789i	1,791	1,889	1,691	1,640	3,976	673
323 U WI Stevens Point	1,649	1,871	1,649	1,179	827	498	449	432
324 CA St U Chico	1,629	3,413	2,158	2,158	1,826i	1,494i	1,162i	830i
325 CA Sch Prof Psy Fresno	1,570	1,424i	1,279	616	875	661	1,382	1,922
326 Indiana State University	1,548	1,208	1,042	835	1,267	1,179	903	967
327 U WI Stout	1,523	1,305	1,500	1,433	2,019	2,282	755	635
328 Midwestern University	1,512	2,126	1,928	1,482	1,097	1,372	1,161	1,651
329 Tougaloo College	1,502i	1,502i	1,502	1,415	1,302	1,262	1,028	1,191
330 Grambling State U	1,455	204	209	210	277i	343i	409	106
Total, 1st 330 institutions	22,675,631	21,906,966	20,768,367	19,707,389	18,636,408	17,303,755	16,025,037	14,707,220
331 College of the Holy Cross	1,419	564	431	928	827i	727i	627i	527i
332 Winston Salem State U	1,406	1,123	940	529	583	617	532	650
333 Baylor Col of Dentistry	1,363	1,131	1,244	754	745	824	849	788
334 U WI La Crosse	1,310	1,133	712	708	875	862	795	531
335 Johnson C Smith U	1,307	1,307	2,083	377	276	475	477	480
336 DePaul University	1,300	1,182	1,329	1,510	914	786	972	905
337 Nova Southeastern U	1,258	1,265	1,245	1,120	1,323	1,667	1,601	1,108
338 Baylor University	1,251	1,471	1,179	1,275	1,469	1,067	1,143	1,841
339 Wentworth Inst of Tech	1,234	1,155	1,504	1,634	1,287	1,460	1,435	1,383
340 SUNY Col Plattsburgh	1,207	1,520	1,108	846	1,022	1,217	1,254	1,030
Total, 1st 340 institutions	22,688,686	21,918,817	20,780,142	19,717,070	18,645,729	17,313,457	16,034,722	14,716,463
341 CUNY H H Lehman Col	1,199	1,327i	1,454	0e	--	--	--	--
342 U of Southern Colorado	1,183	1,464	1,251	1,228	--	--	--	--
343 The Union Institute	1,173	1,155	1,008	0	0	0	0	0
344 Lincoln University (PA)	1,135	818i	502	505	1,090	510	845	768e
345 Claremont Graduate Sch	1,100	1,017	1,229	1,011	639	571	583	746
346 Elizabeth City State U	1,098	758i	418	1,050	341	0	15	26
347 Spelman College	1,084	1,435	1,089	603	547	444	505	399
348 Haverford College	1,077	631	920	914i	913i	912i	911i	910i
349 Murray State University	1,059	1,235	976	1,026	892i	759i	626i	493i
350 Central Michigan U	1,043	558e	1,334	1,733	1,715	1,066	1,071	866
Total, 1st 350 institutions	22,699,837	21,929,215	20,790,323	19,725,140	18,651,866	17,317,719	16,039,278	14,720,671

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
351 Loyola College	1,023	1,386	1,569	1,158	--	--	--	--
352 Union College (NY)	1,016	988	1,054	1,032	1,415	1,254i	1,098i	942i
353 Teachers Col, Columbia U	1,005	736i	468	79	401	429	803	581
354 Alabama State University	1,000	1,000	1,055	534	614	448	423	456
355 CUNY York College	952	900	840	930	877	850	816	826
356 U WI Superior	951	1,611	1,705	1,988	1,881	1,707	1,704	1,745
357 Barnard College	934	1,246	1,306	1,440	1,150	758	653	717
358 SUNY Col Oswego	920	1,056i	1,192	1,001	792	350	160	467
359 Bowdoin College	909	459	481	306	319i	330i	341i	352i
360 CUNY Col Staten Island	901	954	7,045	1,209	1,236	1,140	1,351	1,171
Total, 1st 360 institutions	22,709,448	21,939,551	20,807,038	19,734,817	18,660,551	17,324,985	16,046,627	14,727,928
361 Swarthmore College	871	875	1,401	1,128	1,102i	1,078i	1,054i	1,030i
362 North Carolina Central U	869i	835	409	335	755	477i	199	555e
363 Phila Col Osteopathic Med	869	882	469	1,095	506	423i	340	512
364 Duquesne University	861	1,440	1,115	589	340	572	558	357
365 University of the Pacific	860	970	60	1,124	1,020	1,103	897	990
366 Claflin College	764	540	103	180	240	383	205	0e
367 Chicago State University	757	740	1,248	1,048	943i	842i	741i	640i
368 Kirksville Col Osteo Med	747	910	836	829	856	624	539	727
369 Furman University	728	577	283	253	237i	225i	213i	201i
370 New England Col Opt	723	144	289	333	--	--	--	--
Total, 1st 370 institutions	22,717,497	21,947,464	20,813,251	19,741,731	18,666,550	17,330,712	16,051,373	14,732,940
371 Mount Holyoke College	716i	688i	662i	584i	584i	584i	584i	584i
372 Phila Col of Phar & Sci	695	881	634	755	907	968	1,153	778
373 CUNY Jay Col Crim Just	686	248	181	859	--	--	--	--
374 U of Health Sci (MO)	677	963	718	75	105	0	0	0
375 SUNY Col Geneseo	651	316	518	344	327	214	316	188
376 SUNY Col of Optometry	641	537	680	377	329	231	483	494
377 SUNY Col Old Westbury	640	610	505	440	--	--	--	--
378 Benedict College	634	850	1,062	600	702	0	0	0
379 Monmouth University	630	776	722	404e	184e	175	96	100
380 Truman State University	624	684i	743e	743	720	1,118	1,522	1,605
Total, 1st 380 institutions	22,724,091	21,954,017	20,819,676	19,746,912	18,670,408	17,334,002	16,055,527	14,736,689
381 Morehouse College	592	1,074	992	1,119	1,223	926	868	1,093
382 U WI Green Bay	590	390	350	449	335	329	449	616
383 Bates College	588	340	159	152	--	--	--	--
384 Mississippi Valley St U	586	471	319	213	71	64	43	14
385 Indiana U of PA All Cmp	562	349	374	333	--	--	--	--
386 U of Northern Colorado	561	285	252	240	271	132	223	182
387 Pittsburg State U	546	281	281	303	321i	337i	353i	369i
388 Middle Tennessee State U	535	415	327	163	--	--	--	--
389 SUNY Col Brockport	532	460e	458	373	406	948	833	357
390 Pacific Lutheran U	531	394	222	107	208	130	577	44
Total, 1st 390 institutions	22,729,714	21,958,476	20,823,410	19,750,364	18,673,243	17,336,868	16,058,873	14,739,364
391 CA Sch Prof Psy S Diego	517	510	25	66	69	68	65i	62
392 Appalachian State U	511	549	494	358	--	--	--	--
393 Ohio Wesleyan University	508	319	450	275	--	--	--	--
394 Virginia Military Inst	508	508	394	426	376i	328i	280i	232i
395 University of New Haven	507	505i	504	244	--	--	--	--
396 University of Richmond	507	454	1,080	652	--	--	--	--
397 Fayetteville State U	503	470i	437	273	187	275	154	360
398 University of Hartford	466	357	157	0e	--	--	--	--
399 West Chester U of PA	462	1,919	1,113	710	628i	546i	464i	382i
400 Bethune Cookman College	451	0	507	221	626	599	554	440
Total, 1st 400 institutions	22,734,654	21,964,067	20,828,571	19,753,589	18,675,129	17,338,684	16,060,390	14,740,840

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
401 University of Portland	447	333	257	117	305	169	370	462
402 Valparaiso University	426e	556e	556	490i	424i	358i	292i	226i
403 Pitzer College	423	544i	665	290	--	--	--	--
404 Southern Col of Optometry	414	414	414	414	--	--	--	--
405 U WI Oshkosh	396	330	380	329	310	344	312	217
406 U WI Eau Claire	386	377	666	387	350	292	430	544
407 SUNY Col Cortland	373	244	295	173	118	96	254	168
408 Oakwood College	371	300	161	186	206	179	226	0
409 Andrews University	366	279	247	377	278	255	394	200
410 U WI Whitewater	356	287	201	204	164	141	78	134
Total, 1st 410 institutions	22,738,612	21,967,731	20,832,413	19,756,556	18,677,284	17,340,518	16,062,746	14,742,791
411 La Salle University	329	166i	3	296	--	--	--	--
412 Wilberforce University	323	384	505	200	--	--	--	--
413 Canisius College	318	100	245	1,180	856	337	619	209
414 Adelphi University	317	319	243e	243	355	405	499i	592
415 Savannah State Univ	317	214	128	173	195	212	221	179
416 Sul Ross State University	316	176	143	179	139	156	301	215
417 U Osteo Med & Hlth Sci	316	80	362	396	36	163	67	97
418 Dillard University	314	145	110	0	0	0	0	469
419 College of Wooster	293e	279	220	182	170i	159i	148i	137i
420 Northeastern Illinois U	282	1,513	294	197	257	33	118	77
Total, 1st 420 institutions	22,741,737	21,971,107	20,834,666	19,759,602	18,679,292	17,341,983	16,064,719	14,744,766
421 New York Inst Technology	278	183	346	402	1,297i	2,192i	3,087	3,998
422 Texas A&M U-Commerce	263	282	213	206	176	260	279	401
423 University of San Diego	252	701	641	736	--	--	--	--
424 Selma University	250	495i	740	420	798	650	790	816
425 Fort Lewis College	235	438	462	660	--	--	--	--
426 Marshall University	234	206	540	604	663	918	1,270	1,679
427 Western Carolina U	228	228	263	183	--	--	--	--
428 CA Sch Prof Psy L A	225e	338i	451	427	378	490	1,316	1,551
429 Western U of Hlth Sci	206	152	168	39	6	6	9	11
430 MA Col Phar Allied Hlth	205	275	222	181	156	215	73	41
Total, 1st 430 institutions	22,744,113	21,974,405	20,838,712	19,763,460	18,682,766	17,346,714	16,071,543	14,753,263
431 U WI Parkside	205	319	373	487	587	561	798	883
432 SUNY Col Fredonia	204	382	319	271	283	54	130i	206i
433 SUNY Purchase College	196	226i	255	206	--	--	--	--
434 U of Missouri Sys Admn	196	205	740	915	2,969	3,561	2,991	9,500
435 Towson State University	189	180	146	316	279i	244i	209i	174i
436 SUNY at New Paltz	180	118i	56	87	131	257	387	107
437 Kutztown U of PA	175	224	345	182	146	55	119	195
438 Knoxville College	163	124i	85	23e	33i	42i	51i	60
439 Long Island University	155	238	267	278	217	170	171	313
440 CUNY Bernard Baruch Col	154	243	383	491	1,459	1,897	1,150	646
Total, 1st 440 institutions	22,745,930	21,976,664	20,841,681	19,766,716	18,688,870	17,353,555	16,077,549	14,765,347
441 U WI River Falls	146	115	175	404	370	192	122	142
442 Fairleigh Dickinson U	140	140e	140e	140	118	859	3,183	3,356
443 Iona College	137	135	95	116	--	--	--	--
444 SUNY Col Oneonta	135	144	129	126e	121e	121	104	77
445 CA Sch Prof Psy Brk/Alm	133	72	0	0	0	0	0	0
446 Kennesaw State Univ	132	89	164	121	--	--	--	--
447 McNeese State University	131e	131	0	792	719i	649i	579i	509i
448 WV Sch of Osteo Med	128	121	142	146	112	168	134	120
449 Coppin State College	116	208	218	77	103	212	1,017	834
450 Drew University	115	858	348	272	--	--	--	--
Total, 1st 450 institutions	22,747,243	21,978,677	20,843,092	19,768,910	18,690,413	17,355,756	16,082,688	14,770,385

See explanatory information and SOURCE at end of table.

Table B-32. Total R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
451 Shaw University	115	56	56	53	6	0	0	0
452 Loras College	104	65	80	72	62i	53i	44i	35i
453 Jarvis Christian College	102	219	219	336	97	60	75	60
454 Bennett College	93	112	112	123	914	64	425	364
455 Goucher College	78	56	95	164	71	73	87	78
456 Philander Smith College	73	145	157	157	145	154	120	165
457 Wheeling Jesuit U	71e	71i	71	71	--	--	--	--
458 Providence College	70	36	71	100	80	103	25	18
459 University of Dallas	63	0	0	0	13i	25i	37i	49i
460 University of Bridgeport	62	130	127	189	--	--	--	--
Total, 1st 460 institutions	22,748,074	21,979,567	20,844,080	19,770,175	18,691,801	17,356,288	16,083,501	14,771,154
461 Webb Institute	54	66	57	72	118i	160i	202i	244i
462 Bowie State University	49	173	937	465	425	234	35	0
463 SUNY Col Potsdam	42	67	50	99	104	140	91	145
464 Benedictine University	32	32	31	94	80i	68i	56i	44i
465 Oral Roberts University	30	21	85	140	82	37	60	1,206
466 Central Missouri St U	22	0	159	148	--	--	--	--
467 CUNY NY City Tech Col	20	0	0	66	--	--	--	--
468 Pont Catholic U of PR	20e	20	0	0	91	217	286	515
469 Southwest State U	15	97	0	66	--	--	--	--
470 Fuller Theological Sem	11	14	35	110	40	150	50	60
Total, 1st 470 institutions	22,748,369	21,980,057	20,845,434	19,771,435	18,692,741	17,357,294	16,084,281	14,773,368
471 West Virginia State Col	10	40	241	190	179	218	146	81
472 Notre Dame College	7	9i	10	102	--	--	--	--
473 Forest Inst of Prof Psy	5	8	48	2,717	--	--	--	--
474 U WI Platteville	2	95	88	73	34	38	23	47
475 Antioch University	0	81	128	131	92	0	0	0
476 Biola University	0	0	0	0	0	0	0	13
477 CA Inst of Integral Stu	0	0	0	0	--	--	--	--
478 Golden Gate University	0	0	0	0	--	--	--	--
479 Maharishi U of Mgmt	0	699	776	0e	--	--	--	--
480 Pace University All Cmp	0	0	0e	0e	--	--	--	--
Total, 1st 480 institutions	22,748,393	21,980,989	20,846,725	19,774,648	18,693,046	17,357,550	16,084,450	14,773,509
481 Pacific University	0	0	0	0	22i	44i	66i	88i
482 Pepperdine University	0	0	0	0	--	--	--	--
483 Quinnipiac College	0	0	0	0	0	0	0	0
484 Rust College	0	332	389	346	798	289	156	214
485 SUNY Inst of Tech Utica	0	0	0	0e	--	--	--	--
486 Spalding University	0	15	12	2	--	--	--	--
487 Talladega College	0	0	0	0	0	0	0	366
488 Trenholm State Tech Col	0	0	0	0	0	100	30	22
489 U CA, Office of the Pres	0	0	0	0	0	0	0	0
490 US International U	0	0	0	0	0	0	93	224
Total, 1st 490 institutions	22,748,393	21,981,336	20,847,126	19,774,996	18,693,866	17,357,983	16,084,795	14,774,423
491 Voorhees College	0	0	0	0	0	0	0	211
492 Western Oregon State Col	0	0	40	66	77i	86i	95i	104i
493 Widener U All Campuses	0	0	0	0	54i	105i	156i	207i
Total, 1st 493 institutions	22,748,393	21,981,336	20,847,166	19,775,062	18,693,997	17,358,174	16,085,046	14,774,945
Total, all other sampled insts	0	0	0	173,286	122,089	225,843	200,276	201,259
Estimated total non-sampled insts	247,070	225,917	203,498	0	0	0	0	0

[1] Johns Hopkins University includes Applied Physics Laboratory, with $435 million in total R&D expenditures.

[2] These data do not include R&D expenditures at university-associated federally funded research and development centers. See tables B-73 and B-74.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
Total, all institutions	13,810,064	13,355,537	12,668,286	11,954,091	11,090,616	10,232,823	9,636,732	8,989,780
1 Johns Hopkins Univ[1]	710,119	706,049	711,692	673,601	666,696	641,239	599,851	590,184
2 U of Washington	312,695	291,284	281,033	268,819	257,840	221,124	203,353	182,453
3 U CA San Diego	291,917	284,445	266,166	243,149	219,843	200,451	182,555	171,479
4 Stanford University	281,641	273,157	268,559	254,379	265,687	243,219	255,821	238,650
5 University of Michigan	281,062	275,956	264,722	249,951	223,452	206,276	180,456	174,875
6 MA Institute of Tech[2]	271,544	273,543	270,718	267,414	237,972	237,667	233,813	215,140
7 U CA Los Angeles	236,635	201,773	190,202	189,065	180,743	167,885	164,442	159,002
8 U WI Madison	233,174	229,381	225,403	213,955	199,816	183,652	178,862	169,452
9 U CA San Francisco	221,864	224,271	213,252	210,148	202,283	190,936	175,257	159,906
10 U of Pennsylvania	216,167	200,895	186,409	173,593	159,574	144,451	133,747	123,810
Total, 1st 10 institutions	3,056,818	2,960,754	2,878,156	2,744,074	2,613,906	2,436,900	2,308,157	2,184,951
11 Cornell University[2]	203,082	207,391	193,981	195,229	180,361	173,478	171,249	157,984
12 Harvard University	203,047	203,965	190,183	181,969	174,632	156,014	154,090	143,451
13 University of Minnesota	198,927	194,819	181,039	174,716	165,926	164,887	143,810	132,880
14 Columbia University	195,652	206,495	203,101	182,696	174,777	163,561	156,270	146,712
15 Pennsylvania State U	190,688	187,481	168,679	160,152	151,877	146,212	136,656	114,646
16 U of Southern California	179,281	163,606	149,735	149,965	141,713	132,230	123,714	119,005
17 University of Colorado	177,517	169,666	158,163	138,584	129,894	119,068	116,394	109,145
18 Yale University	176,994	174,868	171,425	168,900	157,345	149,506	144,962	138,835
19 U CA Berkeley[2]	168,171	157,826	152,528	156,394	148,954	140,261	131,717	124,371
20 U of NC Chapel Hill	157,034	156,626	149,047	130,920	113,774	103,485	92,468	93,280
Total, 1st 20 institutions	4,907,211	4,783,497	4,596,037	4,383,599	4,153,159	3,885,602	3,679,487	3,465,260
21 Washington University	155,197	146,921	138,299	129,482	123,863	112,475	105,759	96,829
22 University of Arizona	154,004	168,791	145,696	113,423	105,912	101,818	92,920	80,533
23 University of Pittsburgh	149,960	144,487	148,989	141,934	121,077	99,932	90,700	81,217
24 Duke University	149,631	148,526	148,350	136,377	125,742	114,879	106,053	99,036
25 Texas A&M University	148,675	136,734	136,942	122,533	112,918	97,727	93,001	93,584
26 U TX Austin	147,808	143,939	149,586	139,126	124,614	113,192	109,593	94,311
27 U of Illinois Urbana	144,203	139,078	138,734	141,149	129,086	118,748	117,168	114,398
28 California Inst of Tech[2]	142,474	120,723	112,502	103,888	99,198	100,820	90,577	84,167
29 U CA Davis	130,188	122,645	112,718	105,255	91,318	79,961	77,424	72,718
30 U of Alabama Birmingham	125,804	107,440	98,719	94,762	82,392	76,317	74,486	68,204
Total, 1st 30 institutions	6,355,155	6,162,781	5,926,572	5,611,528	5,269,279	4,901,471	4,637,168	4,350,257
31 Ohio State University	118,811	122,660	113,186	109,069	97,940	88,542	78,878	75,484
32 Georgia Institute of Tech	116,155	104,892	97,075	98,398	101,295	101,476	94,842	98,048
33 University of Chicago[2]	114,123	104,587	102,530	95,930	97,182	93,683	96,327	90,459
34 University of Rochester[2]	112,933	125,897	135,863	130,898	110,413	106,874	105,644	101,049
35 Case Western Reserve U	109,901	107,192	97,302	91,867	83,387	76,390	70,515	68,632
36 U of Iowa	105,646	103,115	99,536	93,483	88,360	81,007	79,046	74,271
37 Northwestern University	100,810	90,387	83,684	77,687	69,241	62,718	62,183	57,510
38 U MD College Park	99,688	94,071	86,051	85,041	82,469	77,866	66,410	58,924
39 University of Miami	96,716	97,111	91,563	91,472	81,856	69,847	68,144	63,101
40 Vanderbilt University	95,684	92,185	92,439	83,683	78,426	71,021	66,747	56,151
Total, 1st 40 institutions	7,425,622	7,204,878	6,925,801	6,569,056	6,159,848	5,730,895	5,425,904	5,093,886
41 Emory University	95,237	92,724	88,735	80,424	69,894	60,586	52,367	46,497
42 University of Utah	93,788	83,554	81,263	83,237	79,386	68,769	62,297	61,819
43 Baylor Col of Medicine	92,294	94,197	92,404	87,623	85,734	78,752	75,793	69,336
44 Carnegie Mellon U[2]	91,830	84,758	87,790	78,666	69,848	65,290	64,550	65,079
45 Purdue University	91,632	93,256	82,148	72,954	68,224	67,810	64,464	63,979
46 Indiana University	90,881	86,041	81,657	77,377	69,871	61,831	57,155	58,334
47 New York University	90,010	93,759	89,013	93,633	87,081	81,896	80,756	81,143
48 Boston University	87,947	83,473	72,551	71,593	66,677	60,166	60,459	56,402
49 SUNY Buffalo	87,813	75,713	81,814	80,723	77,628	68,945	66,876	64,453
50 University of Florida	84,973	79,361	79,630	71,704	67,590	66,777	64,614	60,731
Total, 1st 50 institutions	8,332,027	8,071,714	7,762,806	7,366,990	6,901,781	6,411,717	6,075,235	5,721,659

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
51 Georgetown University	81,704	74,328	54,992	48,463	42,659	41,597	36,093	37,351
52 U TX SW Med Ctr Dallas	81,468	78,892	71,468	67,943	61,499	57,746	54,965	51,254
53 University of Virginia	80,589	85,244	83,670	73,412	68,151	61,060	58,801	51,214
54 VA Polytech Inst & St U	80,319	79,074	73,490	61,708	51,281	47,866	45,949	38,597
55 Oregon State University	79,977	68,687	65,069	61,118	59,739	51,099	50,544	49,112
56 SUNY Stony Brook	79,570	76,505	72,673	68,023	63,608	58,977	55,911	49,726
57 Michigan State University	77,243	77,499	73,855	70,294	66,466	61,646	58,221	51,741
58 University of New Mexico	76,850	90,897	51,780	42,866	40,033	30,141	25,449	23,934
59 Colorado State University	74,930	75,216	66,464	68,733	64,679	55,689	50,744	46,572
60 NC State U Raleigh	74,485	68,675	69,608	62,470	50,501	46,894	43,787	37,783
Total, 1st 60 institutions	9,119,162	8,846,731	8,445,875	7,992,020	7,470,397	6,924,432	6,555,699	6,158,943
61 U of Tennessee System	73,724	76,294	82,288	76,578	72,047	63,575	58,644	57,736
62 U CA Santa Barbara	73,400	63,443	59,336	54,057	52,777	46,647	47,873	39,227
63 Yeshiva University	73,396	72,132e	70,718	71,771	68,152	67,831	65,066	58,224
64 U CA Irvine	72,994	69,655	67,245	64,546	55,331	52,652	52,492	46,492
65 Princeton University[2]	69,386	63,903	58,544	54,369	55,722	52,335	51,559	47,176
66 Rutgers the State U NJ	67,588	72,567	68,149	55,169	56,625	48,822	40,977	35,896
67 U of MD Baltimore	65,211	59,596	59,727	53,556	48,088	43,682	38,841	35,970
68 Louisiana St U, All Camp	64,524	61,456	52,064	52,598	48,641	57,059	48,802	40,114
69 Woods Hole Oceanograph	61,820	72,759	74,219	73,546	74,229	67,154e	62,356	64,333
70 CUNY Mt Sinai Sch Med	61,599	58,991	55,188	49,800	50,853	42,035	43,607	37,233
Total, 1st 70 institutions	9,802,804	9,517,527	9,093,353	8,598,010	8,052,862	7,466,224	7,065,916	6,621,344
71 UT Houston Hlth Sci Ctr	61,456	54,762	46,821	38,664	36,478	32,778	29,017	29,500
72 University of IL Chicago	58,991	57,528	57,074	51,445	48,484	43,203	43,968	43,288
73 University of Georgia	56,254	57,509	55,005	52,085	48,962	45,019	43,864	42,797
74 Wake Forest University	55,845	50,719	36,722	41,861	37,505	33,385	30,182	28,511
75 Iowa State University[2]	54,904	58,766	56,439	50,695	45,144	42,793	34,043	28,895
76 New Mexico State Univ	53,552	57,210	59,632	64,821	62,872	57,522	54,688	45,660
77 Tufts University	53,508	50,481	49,672	46,625	42,112	39,113	38,290	40,771
78 University of Connecticut	53,009	50,096	48,286	49,051	45,967	46,156	43,477	46,184
79 University of Cincinnati	52,561	55,107	56,361	57,394	56,375	47,445	44,966	40,598
80 Thomas Jefferson U	51,475	49,335	43,215	38,293	28,861	23,100	22,451	21,311
Total, 1st 80 institutions	10,354,359	10,059,040	9,602,580	9,088,944	8,505,622	7,876,738	7,450,862	6,988,859
81 University of Kentucky	51,450	50,014	48,801	46,774	39,828	31,636	29,612	27,010
82 Oregon Health Sciences U	51,338	49,429	43,629	38,913	33,548	28,897	27,241	24,162
83 U of South Carolina	51,269	44,292	37,918	28,250	23,743	23,084	20,587	17,596
84 U TX Hlth Sci Ctr San Ant	51,203	54,433	51,671	48,467	41,048	32,770	29,431	29,324
85 Tulane University	49,720	60,837	42,354	36,940	33,304	36,713	28,331	24,095
86 Washington State U	48,807	49,043	45,691	43,678	38,213	32,257	26,884	22,697
87 SUNY Albany	48,395	24,468	23,607	27,318	25,988	12,204	14,497	15,171
88 U Med & Dent NJ	47,505	45,734	40,687	35,524	39,092	38,768	33,185	27,983
89 Wayne State University	46,264	46,246	43,354	40,367	35,569	30,583	28,488	28,167
90 Virginia Commonwealth U	45,454	46,694	47,923	48,777	45,891	44,974	41,606	35,151
Total, 1st 90 institutions	10,845,764	10,530,230	10,028,215	9,483,952	8,861,846	8,188,624	7,730,724	7,240,215
91 Utah State University	43,764	48,431	46,128	45,426	54,904	61,762	58,965	42,449
92 U TX MD Anderson Cncr	42,794	44,711	42,416	41,158	34,492	32,314	28,889	28,992
93 University of Oklahoma	42,679	37,112	35,266	33,298	29,733	25,786	16,871	17,020
94 Brown University	42,139	37,432	36,864	38,851	37,856	35,571	36,919	34,506
95 University of Kansas	41,858	42,209	40,816	37,738	31,992	26,419	26,786	26,420
96 Med U of South Carolina	40,637	36,417	28,507	21,471	17,174	14,367	10,910	11,547
97 U MA Worcester	40,198	36,970	34,923	33,820	35,413	...	...	...
98 Univ of Hawaii Manoa	40,198	44,238	39,392	41,362	47,684	44,857	42,665	40,574
99 Dartmouth College	39,682	39,059	41,762	44,092	38,791	34,317	30,135	27,222
100 Florida State University	39,527	45,947	39,775	38,690	27,649	28,495	32,927	25,498
Total, 1st 100 institutions	11,259,240	10,942,756	10,414,064	9,859,858	9,217,534	8,492,512	8,015,791	7,494,443

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
101 Arizona State University	38,947	35,215	30,699	30,032	33,148	26,246	26,590	22,151
102 U TX Med Br Galveston	38,323	33,204	32,775	30,555	24,281	20,974	21,693	23,152
103 U MA Amherst	37,969	32,126	32,730	32,065	33,408	--	--	--
104 The Rockefeller Univ	37,369	38,993	39,990	36,854	37,832	36,759	36,789	41,192
105 U of Rhode Island	36,337i	35,007i	33,025	32,609	25,480e	23,980	20,511	21,940
106 Mississippi State U	34,637	33,158	33,918	29,616	29,746	25,751	21,426	17,694
107 Medical Col of Wisconsin	34,527	31,098	31,459	31,261	27,668	25,062	21,594	21,432
108 University of Dayton	34,413	37,842	39,994	38,333	34,927	31,132	29,044	26,650
109 U of Missouri Columbia	33,397	32,420	31,299	29,612	28,047	27,463	24,422	22,312
110 Rice University	33,238	26,429	25,672	22,016	21,356	22,838	19,997	16,340
Total, 1st 110 institutions	11,618,397	11,278,248	10,745,625	10,172,811	9,513,427	8,732,717	8,237,856	7,707,306
111 U of Nebraska Lincoln	32,352	36,897	35,471	23,930	25,382	27,499	22,686	25,803
112 U CA Santa Cruz	31,727	26,043	23,802	21,821	20,237	15,805	13,855	12,543
113 University of Vermont	31,521	32,932	33,695	31,530	32,757	30,860	30,555	28,535
114 Auburn University	31,401	27,544	27,747	17,438	15,415	15,279	14,629	15,179
115 West Virginia University	30,800	30,258	34,622	31,092	27,740	19,582	21,639	15,662
116 George Washington U	30,490	28,031	24,379	27,698	28,158	23,715	26,817	25,220
117 U of Alaska Fairbanks	30,351	37,285	40,770	41,616	32,066	34,335	31,896	26,659
118 US Naval Postgrad School	29,873	27,155	26,225	23,640	20,171	19,264	17,333	15,170
119 U of South Florida	29,751	29,558	19,910	16,718	18,010	23,578	30,481	26,576
120 University of Delaware	29,509	27,352	26,250	26,170	21,629	20,053	17,588	17,083
Total, 1st 120 institutions	11,926,172	11,581,303	11,038,496	10,434,464	9,754,992	8,962,687	8,465,335	7,915,736
121 Temple University	28,720	28,303	27,140	26,548	26,869	28,873	26,164	25,232
122 Clemson University	28,109	28,734	24,133	23,299	18,771	16,594	14,221	12,484
123 Loyola U of Chicago	27,931	25,759i	23,587	18,230	18,071	14,703	6,203	6,051
124 U CA Riverside	27,727	25,127	23,743	19,126	17,167	16,031	15,806	15,584
125 Allegheny U of Hlth Sci	27,723	23,905	26,324	26,664	27,711	22,452	19,948	19,323
126 University of Oregon	26,411	23,789	22,204	21,465	21,002	19,311	20,151	17,286
127 Howard University	26,253	21,137	15,196	14,819	13,976	10,754	13,067	12,146i
128 U of Alabama Huntsville	26,141	25,417	21,583	24,983	24,432	21,761	21,355	18,001
129 University of Houston	25,448	22,633	22,830	34,350	21,881	20,140	17,575	16,358
130 Clark Atlanta University	25,345	15,821	11,025	10,484	9,985	6,538	6,055i	5,575i
Total, 1st 130 institutions	12,195,980	11,821,928	11,256,261	10,654,432	9,954,857	9,139,844	8,625,880	8,063,776
131 Oklahoma State University	25,034	18,951	20,440	20,840	15,384	15,756	17,744	14,116
132 Kansas State University	24,769	25,266	21,547	19,582	18,583	15,726	15,651	15,951
133 Rensselaer Polytech Inst	24,748	24,250	22,090	22,106	24,313	23,372	22,809	19,143
134 Unif Svcs U of Hlth Sci	24,621	25,858	18,124	22,319	20,377i	18,436i	16,495i	14,554i
135 Univ of North Dakota	23,976	16,157	16,660	16,467	15,895	14,470	14,398	14,104
136 U of New Hampshire	23,305	21,072	25,032	23,635	21,591	18,516	14,455	14,594
137 Brandeis University	23,233	22,741	21,585	21,825	21,800	21,280	18,819	19,080
138 Rush University	22,480	18,124	14,831	12,787	9,130	7,010	6,083	7,582
139 Lehigh University	22,409	21,410	15,363	16,038	17,426	11,870	11,242	9,925
140 Saint Louis University	21,483	19,351	18,120	18,583	17,708	16,358	14,106	12,272
Total, 1st 140 institutions	12,432,038	12,035,108	11,450,053	10,848,614	10,137,064	9,302,638	8,777,682	8,205,097
141 U of Nevada Reno	20,971	21,377	18,799	17,097	14,085	10,858	11,922	8,647
142 NJ Inst of Technology	20,561	15,109	12,572	8,275	5,778	4,080	2,731	1,082
143 Florida A&M University	20,118	19,430	20,730	18,954	18,698	15,592	13,110	10,509
144 U PR Mayaguez	19,568	18,048	9,369	8,487	9,117	11,727i	14,337	14,114
145 SUNY Hlth Sci Ctr Brklyn	19,072i	18,374	16,695	17,916	15,896	17,949	14,574	11,552
146 University of Notre Dame	18,886	17,424	16,358	16,415	15,058	13,587	12,867	13,209
147 U of Central Florida	18,714	20,077	16,549	12,527	9,151	10,406	9,354	11,153
148 Syracuse University	18,361	19,341	19,309	16,818	14,715	14,192	18,924	20,367
149 Montana St U Bozeman	17,667	17,233	15,738	14,096	13,443	10,109	9,052	8,781
150 San Diego St University	17,181	16,436	12,268	16,862	15,679	16,744	14,647	13,048
Total, 1st 150 institutions	12,623,137	12,217,957	11,608,440	10,996,061	10,268,684	9,427,882	8,899,200	8,317,559

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
151 U Arkansas Medical Sci	16,796	16,117	13,410	10,964	9,642	7,807	6,654	5,258
152 University of Idaho	16,481	18,239	16,586	15,877	16,601	15,149	13,812	12,207
153 George Mason University	16,430	14,939	12,679	10,498	8,439	5,601	2,494	1,171
154 U of Maine	16,211	15,789	11,386	8,959	8,975	10,062	9,046	8,288
155 CUNY City College	16,169	15,512	13,585	14,785	12,175	11,220	10,554	9,005
156 U Arkansas Main	16,019	17,231	16,040	14,398	12,421	12,371	10,831	8,955
157 U Mississippi, All Camp	15,571	17,466	15,836	14,917	16,097	16,937	14,973	10,841
158 C R Drew U of Med & Sci	15,288	10,500	7,674	6,483	5,949	5,311	4,104i	2,898
159 University of Wyoming	14,991	15,373	15,115	14,575	13,298	12,782	12,207	13,804
160 U TX Arlington	14,804	8,692	4,637	3,995	3,296	2,741	1,795	1,406
Total, 1st 160 institutions	12,781,897	12,367,815	11,735,388	11,111,512	10,375,577	9,527,863	8,985,670	8,391,392
161 Northeastern University	14,706	17,113	16,037	15,339	12,841	11,529i	10,217	10,201
162 Desert Research Institute	14,600	15,867	15,272	15,514	11,508	9,795	8,767	8,968
163 U of NE Med Ctr Omaha	14,029	13,375	12,256	10,131	9,740	10,518	9,078	8,572
164 Michigan Tech University	13,978	12,807	10,984	9,777	8,242	6,870	6,045	5,210
165 Florida International U	13,415	13,030	10,936	9,289	--	--	--	--
166 University of Louisville	13,306	9,782	9,274	8,924	7,267	6,750	8,637	5,953
167 Col of William & Mary	13,020	11,731	10,426	10,335	[illegible]	7,282	6,460	5,349
168 Texas Tech University	13,013	11,450	11,360	10,897	11,121	9,323	9,349	10,939
169 NC A&T State University	12,521	12,501	10,132	8,759	8,196	8,205	7,503	5,752
170 The University of Alabama	12,238	12,236	11,4[illegible]	8,583	6,877	5,427	6,941	6,542
Total, 1st 170 institutions	12,916,723	12,497,707	11,853,547	11,219,060	10,459,578	9,603,563	9,058,667	8,458,878
171 U PR Med Sci Campus	12,191	12,433	11,973	9,775	14,619	8,610	5,366	5,235
172 Morehouse School of Med	11,747	6,996	6,663	6,597	6,155	5,652i	5,149	4,238
173 North Dakota State U	11,683	11,684	10,877	8,756	8,677	7,100	6,417	5,292
174 New York Medical College	11,657	13,778	14,913	13,468	13,061	11,056	9,028	10,021
175 Drexel University	11,613	9,444	11,006	11,335	9,869	7,559	6,761	6,371
176 The University of Montana	11,591	10,149	8,675	7,303	5,024	3,692	3,468	2,771
177 Medical Col of Georgia	11,338	11,007	9,121	7,713	7,747	8,081	8,045	7,392
178 Oregon Grad Inst Sci Tech	11,215	11,512	10,458	9,591	7,138	6,962	6,837	6,582
179 Illinois Inst of Tech	11,183	9,119	6,738	6,349	4,165	4,114	3,887	3,947
180 U of Nevada Las Vegas	11,142	10,464	9,543	10,585	10,006	17,568	13,270i	8,972i
Total, 1st 180 institutions	13,032,083	12,604,293	11,953,514	11,310,532	10,546,039	9,683,957	9,126,895	8,519,699
181 Boston College	11,137	9,990	7,938	8,151	8,695	8,673	6,798	5,824
182 Meharry Medical College	11,004	10,208	10,154	9,074	6,673	7,014	6,391	6,397
183 Mercer University	10,832	9,178	11,115	10,241	7,325	6,388	3,590	1,812
184 U TX El Paso	10,471	9,511	9,085	9,229	7,433	6,972	5,451	2,561
185 Prairie View A&M U	10,325	6,284	5,693	4,885	4,824	3,373	3,406	3,568
186 U MA Lowell	10,257	8,097	7,281	5,959	6,872	6,541	4,662	5,974
187 Eastern VA Med School	10,203	9,824	10,162	9,753	6,966	7,093	7,782	6,887
188 U of South Alabama	9,747	9,135	8,838	8,270	7,769	7,798	7,237	6,966
189 Med Col of Ohio Toledo	9,559	9,243	8,726	8,286	7,083	5,970	5,956	5,855
190 Colorado School of Mines	9,534	8,847i	8,161	7,050	6,348	6,487	5,310	4,435
Total, 1st 190 institutions	13,135,152	12,694,610	12,040,667	11,391,430	10,616,027	9,750,266	9,183,478	8,569,978
191 Wright State University	9,502	9,619	9,624	10,081	8,655	8,047	7,426	5,714
192 Old Dominion University	9,266	7,968	7,888	7,050	6,284	6,576	7,036	6,175
193 Stevens Inst of Tech	9,222	8,677	7,644	10,552	5,435	3,116	2,960	2,532
194 Western Illinois U	9,016	9,045	8,983	10,096	8,133i	6,170i	4,207i	2,244i
195 Sthrn IL U Carbondale	8,836	10,100	9,931	7,437	7,382	7,092	8,035	6,571
196 Brigham Young University	8,752e	8,615	8,126	7,967	8,106	7,082	5,357	4,785
197 Alabama A&M University	8,382i	8,075	8,954	7,295	5,635	5,481	5,560	4,801
198 Tuskegee University	8,231	7,200	6,694	5,154	4,498	4,137	4,783	4,967
199 U MD Baltimore County	8,135	7,131	6,080	4,845	4,893	4,723	4,147	3,457
200 Ohio University	8,046	7,587	5,836	5,168	4,856	4,539	4,140	3,722
Total, 1st 200 institutions	13,222,540	12,778,627	12,120,427	11,467,075	10,679,904	9,807,229	9,237,129	8,614,946

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
201 U WI Milwaukee	8,026	7,749	7,977	7,455	7,641	6,808	6,715	5,447
202 Tennessee State U	7,983	6,478	6,031	5,245	4,465	3,701	3,290	3,382
203 University of Denver	7,770	9,877	6,144	7,555	7,236	6,484i	7,476	6,825
204 Kent State University	7,729	6,506	6,005	6,363	5,806	5,171	4,656	2,613
205 Southern U A&M All Camp	7,724	7,480	4,620	4,828	4,407	4,332	4,066i	3,801e
206 U Southern Mississippi	7,587	7,500	7,291	6,351	4,820	6,736	3,944	3,588
207 U MD Biotechnology Inst	7,529	7,037	6,079	..	..	..	..	..
208 NM Inst Mining & Tech	7,205	8,447	7,582	5,373	7,682	6,646i	5,610	7,183
209 Worcester Polytech Inst	6,967	8,552	9,584	9,164	6,018	3,050	2,365	2,411
210 Northern Arizona U	6,938	6,469	5,614	6,348	4,180	3,563	2,749	2,683
Total, 1st 210 institutions	13,297,998	12,854,722	12,187,354	11,525,757	10,732,159	9,853,720	9,278,000	8,652,879
211 SUNY Hlth Sci Ctr Syrcse	6,764	6,854	6,555	7,238	7,500	10,667	9,965	9,520
212 Albany Medical College	6,691	8,686	8,344	8,564	6,740	6,291	6,073	7,259
213 Florida Atlantic U	6,500	9,643	6,797	5,655	4,431	2,953	2,010	1,295
214 Polytechnic University	6,329	6,863	6,872	6,394	5,600	5,600	7,025	6,824
215 CUNY Hunter College	6,083	6,152	7,156	6,875	5,687	5,524	4,531	4,065
216 Southern Methodist U	6,007	4,352	4,984	4,932	5,138	5,966	11,000e	6,244
217 U MD Center for EES	5,998	5,952	5,452	5,413	4,321	2,857	2,379	2,519
218 Catholic U of America	5,901	6,467	6,058	5,796	5,388	6,301	6,783	6,077
219 Loma Linda University	5,878	5,416	5,082	4,963	4,036	2,529	3,349	2,294
220 Georgia State University	5,818	6,277	6,771	5,826	4,021	3,516	3,621	2,507
Total, 1st 220 institutions	13,359,967	12,921,384	12,251,425	11,587,413	10,785,021	9,905,924	9,334,736	8,701,483
221 Portland State University	5,675	4,659	4,377	3,869	2,771	2,580	2,693	1,999
222 SUNY Binghamton	5,661	5,659	5,100	5,005	4,611	3,130	3,702	2,914
223 U of Missouri Rolla	5,587	5,834	6,472	6,128	4,819	4,360	3,863	3,459
224 U TX Dallas	5,583	6,404i	7,224	8,031i	7,676	4,822	5,888	6,812
225 South Dakota State U	5,500	5,622	5,711	5,033	4,751	4,102	3,666	3,254
226 Finch U Hlth Sci Chicago	5,209	4,789	5,214	5,033	4,167	3,650	3,547	3,269
227 Xavier University of LA	5,106	8,979	4,176	3,145	2,365	2,424	1,902	1,294
228 University of Tulsa	5,104	3,441	3,319	2,337	1,369	1,264	1,037	926
229 Creighton University	5,046	4,474	4,653	3,962	3,478	2,580	2,405	2,386
230 CA St U Long Beach	5,013	4,859i	4,712i	4,565i	4,418i	4,271i	4,124i	3,977i
Total, 1st 230 institutions	13,413,451	12,976,104	12,302,383	11,634,521	10,825,446	9,939,107	9,367,563	8,731,773
231 The University of Memphis	4,954	4,565	4,027	3,504	3,586	2,954	2,666	2,299
232 U of Missouri Kansas City	4,851	4,506	4,758	4,967	4,419	3,123	2,767	2,391
233 U North TX Health Sci Ctr	4,847	3,985	4,045	3,753	2,804	3,135	2,031	2,518
234 Northern Illinois U	4,809	5,764	6,238	5,663	5,384	4,617	3,251	2,948
235 University of Akron	4,793	4,231	4,016	4,329	4,243	3,411	3,005	2,525
236 Jackson State University	4,702	4,461i	4,220	3,831	3,849	3,429	3,381	3,624
237 Sam Houston State U	4,495	3,094i	1,694	380	220	229	93	84
238 Ponce School of Medicine	4,212	3,150	2,874	2,436	1,573	1,347	919	782
239 U TX San Antonio	4,111	3,398i	2,685	2,185	..	..	..	..
240 East Carolina University	4,079	4,964	5,188	4,392	3,605	3,612	3,499	2,690
Total, 1st 240 institutions	13,459,304	13,018,222	12,342,128	11,669,961	10,855,129	9,964,964	9,389,175	8,751,634
241 Wesleyan University	3,889	2,651	2,710	2,611	2,588	1,458	1,949	2,193
242 U PR Rio Piedras	3,866	3,315	3,660	3,616	2,626	2,860	2,980	2,855
243 Hampton University	3,854	6,130	5,078	4,597	3,272	3,345	2,307	2,168
244 Morgan State University	3,813i	3,594i	3,423	1,456	1,179	683	655	638
245 Clarkson University	3,794	4,793	6,115	5,795	4,229	4,229	3,841	4,359
246 Cleveland State U	3,588i	3,457	4,620	5,187	5,042	4,528	3,695	2,760
247 University of Toledo	3,506e	3,187	3,505	3,727	3,304	2,997	2,101	1,966
248 University of North Texas	3,492	3,696	2,858	2,277	1,932	1,942	1,974	2,813
249 Texas Southern U	3,474	3,474	2,353	3,652	2,028	1,810	1,363	1,293
250 U MA Dartmouth	3,433	3,221	2,771	1,802	1,425	..	..	..
Total, 1st 250 institutions	13,496,013	13,055,740	12,379,221	11,704,681	10,882,754	9,988,816	9,410,040	8,772,679

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
251 Alcorn State University	3,365	3,202i	3,039	3,038	2,132	1,665	1,487	1,850
252 SD Sch of Mines & Tech	3,278	3,369	2,903	2,556	2,362	2,056	2,268	2,128
253 Oakland University	3,222	3,860	3,202	3,026	3,013	2,852	1,882	2,767
254 Western Michigan U	3,198	2,753	2,699	2,383	1,436	845	585	488i
255 SUNY Col Env Sci Frstry	3,021	3,186i	3,351	3,177	2,427	2,126	1,973	1,883
256 Florida Inst of Tech	2,980	2,213	1,654	1,903	2,080	1,640	1,251	898
257 U of Southwestern LA	2,936	2,307	1,998	1,130	1,007	929	874	818
258 American University	2,864	2,807	3,052	3,569	3,926	4,426	3,532	3,480
259 U of Missouri St Louis	2,803	2,840	2,559	1,818	1,495	1,046	1,167	1,430
260 Kentucky State University	2,761	2,920	2,665	2,349	2,525	2,026	2,856	1,721
Total, 1st 260 institutions	13,526,441	13,085,197	12,406,343	11,729,630	10,905,157	10,008,427	9,427,915	8,790,142
261 U Arkansas Pine Bluff	2,747	3,661	2,341	2,164	2,372	2,176	1,188	1,148
262 Virginia State University	2,735	2,599	4,529	4,761	6,031	5,347	2,744	2,056
263 U MA Boston	2,706	2,454	2,382	2,133	2,019	--	--	--
264 Lincoln University	2,681	2,702	2,869	2,726	2,851	2,763	2,600	2,706
265 Miami University (OH)	2,633	2,314	2,789	2,343	1,918	2,050	1,365	1,659
266 CUNY Grad Sch & U Ctr	2,575i	2,481i	2,341	2,386	2,811	2,161	2,990	2,112
267 Rochester Inst of Tech	2,545	1,731	2,478	1,561	1,341i	1,124i	907i	690i
268 Wellesley College	2,533	1,568	1,537	1,524i	1,512i	1,500i	1,488i	1,476i
269 Langston University	2,521	2,661	1,929	1,570	1,446	1,310	1,200	1,961
270 Bowling Green State U	2,436i	2,347	2,317	1,686	1,496	1,602	1,882	1,770
Total, 1st 270 institutions	13,552,553	13,109,715	12,431,855	11,752,484	10,928,954	10,028,460	9,444,279	8,805,720
271 U of the Virgin Islands	2,428	2,040i	1,653	2,283	2,403i	2,521i	2,639e	2,600
272 Morris Brown College	2,422	3,796	927	1,227	1,217e	442	464e	164
273 Inst Paper Sci and Tech	2,397i	2,341	1,629	1,311	1,317	1,408	965	1,382
274 U Ctrl Del Caribe Esc Med	2,353	2,387	1,664	1,426	1,100	617	546	640
275 U of South Dakota	2,350	1,632	1,357	1,511	981	759	940	784
276 New Mexico Highlands U	2,345	1,902i	1,459	283	247i	211i	175i	139i
277 Fort Valley State U	2,338	2,936	2,591	2,413	2,384	2,047	1,938	1,741
278 Air Force Inst of Tech	2,291	2,229	2,426	3,252	3,813	2,243	2,200	1,800i
279 Hofstra University	2,290	2,218	1,786	1,073	211	418	445	256
280 Marquette University	2,270	2,394	2,640	2,524	2,612	2,068	1,855	1,487
Total, 1st 280 institutions	13,576,037	13,133,590	12,449,987	11,769,787	10,945,239	10,041,194	9,456,446	8,816,713
281 Wichita State University	2,196	2,551	1,752	2,315	2,575	1,768	1,041	1,921
282 Norfolk State University	2,187	1,256	671	566	769	726	825	648
283 Texas Christian U	2,159	1,972	2,600	2,693	2,765	2,430	1,362	488
284 Illinois State University	2,110	2,632	2,347	1,839	1,470	1,241	1,193	973
285 Idaho State University	2,054	1,471	1,489	1,149	742	532	549	378
286 U MD Eastern Shore	1,980	1,880	1,128	2,691	3,096	1,371	1,552	2,203
287 Fisk University	1,969	1,741i	1,514	1,418	1,235	616	1,156	1,131
288 South Carolina State U	1,910	2,325i	2,739	2,460	2,075	1,309	1,308	1,014i
289 Boise State University	1,875	1,597	1,452	557	--	--	--	--
290 Delaware State University	1,787	999	3,686	1,262	1,253	915	920	920
Total, 1st 290 institutions	13,596,264	13,152,014	12,469,365	11,786,737	10,961,219	10,052,102	9,466,352	8,826,389
291 SUNY Col Buffalo	1,786	1,029	1,095	1,290	1,157	1,000	520	583i
292 Clark University	1,756	1,910	2,301	1,717	1,121	936	919	794
293 University of DC	1,756	1,784i	1,811e	1,705i	1,600	1,585	1,455	1,330i
294 U of NC Greensboro	1,730	2,172	1,971	1,963	1,800	1,666	806	596
295 Stephen F Austin St U	1,684	985	441	330	292	282	289	332
296 Northeast Louisiana U	1,573	1,724	1,600	1,391	2,112	663	675	56
297 Ball State University	1,459	820	696	606	330	226	153	178
298 Lamar University	1,451	1,549	2,320	2,158	2,046	1,914	1,317	388
299 Grambling State U	1,450	145	155	155	164i	173i	182	106
300 Fordham University	1,421	1,327	1,304	1,006	1,468	1,303	1,723	2,063
Total, 1st 300 institutions	13,612,330	13,165,459	12,483,059	11,799,058	10,973,309	10,061,850	9,474,391	8,832,815

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
301 CUNY Brooklyn College	1,408	1,666	1,138	1,373	1,454i	1,533i	1,612i	1,691i
302 Villanova University	1,390	1,362	1,061	980	882	708	943	885
303 CUNY Queens College	1,365	2,023	1,663	1,911	1,787	1,989	1,987	1,919
304 Tennessee Tech U	1,250	1,182	1,208	1,266	1,534	949	1,286	743
305 Winston Salem State U	1,246	797	780	529	583	617	532	650
306 College of the Holy Cross	1,245	379	307	545	473i	402i	331i	260i
307 Seton Hall University	1,243i	1,214e	3,072	2,893i	2,723i	2,553i	2,383i	2,213i
308 St John's University (NY)	1,227	941	962	590	743	528	519	361
309 Central State University	1,180i	1,180i	1,180	1,272	930	680	2,323	449
310 Lincoln University (PA)	1,135	818i	502	432	953	437	632	692e
Total, 1st 310 institutions	13,625,019	13,177,021	12,494,832	11,810,849	10,985,371	10,072,246	9,486,939	8,842,678
311 Johnson C Smith U	1,083	1,083	1,803	377	276	454	467	480
312 N.E. Ohio Univs Col Med	1,068	1,459	1,136	965	936	724	708	811
313 Bryn Mawr College	1,039	1,411	1,294	1,277	801	976	1,252	536
314 Wentworth Inst of Tech	1,023	1,155	1,434	1,634	1,287	1,460	1,435	1,383
315 Texas Woman's University	1,006	882	714	692	583	466	476	325
316 Spelman College	988	1,277	954	569	514	358	348	272
317 Loyola College	981	1,359	1,564	1,131	..	..	..	..
318 Alabama State University	970	970	1,026	528	502	442	403	456
319 U of Southern Colorado	959	1,264	1,131	1,031	..	..	..	..
320 U of Detroit Mercy	950	1,213	1,339	770	318	309	245	55
Total, 1st 320 institutions	13,635,086	13,189,094	12,507,227	11,819,823	10,990,588	10,077,435	9,492,273	8,846,996
321 Tarleton State University	911	672	572	570	12	370	88	0
322 CUNY York College	903	882	819	905	872	622	655	754
323 CA Sch Prof Psy Fresno	895	673i	452	74	252	208	985	1,566
324 CUNY H H Lehman Col	891	1,011i	1,130	0	..	..	..	..
325 U WI Stout	881	741	835	954	1,174	1,173	121	39
326 North Carolina Central U	863i	813	409	313	683	441i	199	422e
327 Nova Southeastern U	861	711	885	805	974	1,395	1,341	981
328 University of the Pacific	860	970	60	1,043	995	1,039	897	990
329 DePaul University	842	856	868	893	594	507	623	772
330 Baylor Col of Dentistry	822	682	830	537	437	696	682	641
Total, 1st 330 institutions	13,643,815	13,197,105	12,514,087	11,825,917	10,996,581	10,083,886	9,497,864	8,853,161
331 Elizabeth City State U	753	497i	241	605	339	0	15	26
332 U WI La Crosse	748	601	141	211	315	258	185	108
333 Tougaloo College	745i	745i	745	636	702	684	566	787
334 SUNY Col Plattsburgh	740	625	629	741	924	1,027	930	755
335 Chicago State University	739	717	1,237	1,048	936i	827i	718i	609i
336 East Tennessee State U	738	830	1,026	791	886	1,060	1,219	919
337 U of Northern Iowa	712	1,099	565	485	108	58	136	108
338 Barnard College	678	813	1,031	1,007	869	540	546	665
339 Albany State University	675e	675i	675	1,068	627	536	516	653
340 Smith College	668i	652i	627	544i	462i	380i	298	903
Total, 1st 340 institutions	13,651,011	13,204,359	12,521,004	11,833,053	11,002,749	10,089,256	9,502,993	8,858,694
341 Swarthmore College	661	538	582	592	633i	670i	707i	744i
342 New Sch for Socl Res	656i	641i	616	376	376	344	293	251
343 Haverford College	635	496	584	593i	597i	601i	605i	609i
344 U WI Stevens Point	629	860	701	399	234	128	167	226
345 U WI Superior	619	1,274	1,411	1,338	1,243	1,402	1,550	1,495
346 Duquesne University	618	832	712	297	202	250	216	68
347 Monmouth University	614	739	694	357e	141e	135	46	100
348 Midwestern University	613	458	465	303	149	175	318	314
349 Union College (NY)	610	538	194	444	279	261i	247i	233i
350 Alfred University	600	1,004	859	797	403	320	344	449
Total, 1st 350 institutions	13,657,266	13,211,739	12,527,822	11,838,549	11,007,006	10,093,542	9,507,486	8,863,183

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
351 Morehouse College	591	793	730	1,117	1,214	917	868	997
352 Hampshire College	586i	586i	586	558	--	--	--	--
353 Mississippi Valley St U	586	471	319	213	71	64	43	14
354 CUNY Jay Col Crim Just	579	141	164	412	--	--	--	--
355 CUNY Col Staten Island	557	503	652	705	615	634	576	579
356 Louisiana Tech University	555i	535i	505	687	1,660	1,072	2,629	2,842
357 Benedict College	552i	740i	925	600	702	0	0	0
358 SUNY Col Oswego	551	595i	638	299	188	75	71	76
359 Indiana State University	532	369	367	391	498	307	314	340
360 Indiana U of PA All Cmp	520	283	159	196	--	--	--	--
Total, 1st 360 institutions	13,662,875	13,216,755	12,532,867	11,843,727	11,011,954	10,096,611	9,511,987	8,868,031
361 SUNY Col Old Westbury	510	517	412	400	--	--	--	--
362 Fayetteville State U	503i	470i	437	273	187	275	154	258
363 Mount Holyoke College	488i	460i	438i	399i	399i	399i	399i	399i
364 Kirksville Col Osteo Med	482	715	478	369	392	254	198	306
365 Furman University	475	480	200	179	175i	171i	167i	163i
366 Claflin College	474	290	103	180	240	381	203	0e
367 U of Northern Colorado	470	196	177	185	158	91	54	66
368 Santa Clara University	450i	439i	422e	422	459	408	550	672
369 Ohio Wesleyan University	444	250	260	245	--	--	--	--
370 New England Col Opt	437	0	120	65	--	--	--	--
Total, 1st 370 institutions	13,667,608	13,220,572	12,535,914	11,846,444	11,013,964	10,098,590	9,513,712	8,869,895
371 Baylor University	433	502	368	407	635	324	369	346
372 Bowdoin College	388	290	325	257	234i	211i	188i	165i
373 Bates College	387	285	101	112	--	--	--	--
374 Oakwood College	371	300	161	186	206	179	226	0
375 Murray State University	362	284	309	325	281i	240i	199i	158i
376 Phila Col of Phar & Sci	342	300	250	160	279	368	381	288
377 Bethune Cookman College	333	0	358	218	590	548	494	420
378 SUNY Col of Optometry	327	130	258	164	160	118	294	292
379 Valparaiso University	327i	308i	293	260i	228i	196i	164i	132i
380 Wilberforce University	323	384	505	200	--	--	--	--
Total, 1st 380 institutions	13,671,201	13,223,355	12,538,842	11,848,733	11,016,577	10,100,774	9,516,027	8,871,696
381 Savannah State Univ	317	214	128	168	195	212	221	179
382 Dillard University	314	145	110	0	0	0	0	0
383 University of Richmond	306i	288	718	390	--	--	--	--
384 Appalachian State U	303	440	412	284	--	--	--	--
385 La Salle University	302	151i	0	143	--	--	--	--
386 SUNY Col Brockport	288	231e	234	171	165	425	297	230
387 University of New Haven	272	203i	134	49	--	--	--	--
388 West Chester U of PA	271	1,017	945	398	346i	296i	246i	196i
389 Teachers Col, Columbia U	262	226i	190	0	138	95	181	230
390 Claremont Graduate Sch	256	201	293	53	15	66	47	106
Total, 1st 390 institutions	13,674,092	13,226,471	12,542,006	11,850,389	11,017,436	10,101,868	9,517,019	8,872,637
391 Andrews University	252	103	109	82	98	101	96	24
392 SUNY Col Geneseo	251	101	194	317	245	135	200	151
393 Selma University	250	495i	740	420	798	650	790	816
394 SUNY Col Cortland	246	168	236	173	113	88	75	102
395 U WI Eau Claire	242	224	396	179	178	126	268	355
396 Virginia Military Inst	240	217	240	252	224i	199i	174i	149i
397 Marshall University	234	206	540	570	623	883	1,244	1,647
398 U WI Whitewater	233	197	92	80	65	31	42	107
399 Adelphi University	221	220	98e	98	89	152	216i	280
400 U WI Green Bay	215	218	143	152	184	198	267	252
Total, 1st 400 institutions	13,676,476	13,228,620	12,544,794	11,852,712	11,020,053	10,104,431	9,520,391	8,876,520

See explanatory information and SOURCE at end of table.

Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
401 Central Michigan U	213	310i	406	628	734	110	60	179
402 Fort Lewis College	204	332	460	494	--	--	--	--
403 College of Wooster	191i	191	179	151	136i	124i	112i	100i
404 Pitzer College	182	190i	197	280	--	--	--	--
405 U of Health Sci (MO)	180	163	0	0	0	0	0	0
406 University of San Diego	167	574	502	302	--	--	--	--
407 Knoxville College	163i	124i	85	23i	33i	42i	51i	50
408 SUNY Purchase College	161	138i	116	67	--	--	--	--
409 Kutztown U of PA	157	160	206	46	126	43	37	37
410 Towson State University	148	178	146	171	151i	132i	113i	94i
Total, 1st 410 institutions	13,678,242	13,230,980	12,547,091	11,854,874	11,021,233	10,104,882	9,520,764	8,876,980
411 SUNY Col Fredonia	144	148	55	98	116	27	59i	90i
412 Sul Ross State University	137	21	9	47	38	71	171	98
413 McNeese State University	131e	131	0	26	62i	98i	134i	170i
414 Iona College	127	121	80	91	--	--	--	--
415 Truman State University	125	91i	58e	58	52	26	18	122
416 Middle Tennessee State U	119	55	44	36	--	--	--	--
417 U WI Oshkosh	119	172	207	245	213	280	238	161
418 University of Portland	119	92	59	48	198	121	311	0
419 Coppin State College	116	208	218	77	103	212	387	388
420 Drew University	115	192	189	125	--	--	--	--
Total, 1st 420 institutions	13,679,494	13,232,211	12,548,010	11,855,725	11,022,015	10,105,717	9,522,082	8,878,009
421 Shaw University	115	56	56	53	6	0	0	0
422 Western U of Hlth Sci	115	67	68	0	0	0	0	0
423 Kennesaw State Univ	111	71	148	121	--	--	--	--
424 U WI Parkside	111	174	220	310	413	362	581	651
425 Canisius College	109	62	188	699	734	221	524	194
426 Southern Col of Optometry	109	109	109	109	--	--	--	--
427 CA St U Chico	107	295	270	270	222i	174i	126i	78i
428 Jarvis Christian College	102	219	219	336	97	60	75	60
429 CA Sch Prof Psy S Diego	99	431	0	0	0	0	0i	0
430 Western Carolina U	95	116	114	83	--	--	--	--
Total, 1st 430 institutions	13,680,567	13,233,811	12,549,402	11,857,706	11,023,487	10,106,534	9,523,388	8,878,992
431 Bennett College	93i	111	105	122	784	62	358	229
432 Phila Col Osteopathic Med	91	238	304	830	314	198i	83	302
433 Texas A&M U-Commerce	80	42	41	39	0	85	113	89
434 Goucher College	77	55	92	91	29	54	32	27
435 Philander Smith College	73	145	137	157	136	154	120	154
436 Loras College	69	37	19	2	7i	8i	9i	10i
437 SUNY at New Paltz	64	42i	21	31	71	153	112	54
438 Northeastern Illinois U	62	16	0	0	0	22	68	26
439 U WI River Falls	55	19	70	312	268	118	27	43
440 Fairleigh Dickinson U	54i	53e	53e	53	2	370	2,364	2,355
Total, 1st 440 institutions	13,681,285	13,234,569	12,550,244	11,859,343	11,025,098	10,107,758	9,526,674	8,882,281
441 Bowie State University	49	93	937	465	425	234	35	0
442 CUNY Bernard Baruch Col	41	142	259	354	223	344	207	287
443 University of Hartford	41	300	148	0	--	--	--	--
444 Providence College	39	22	29	55	47	65	0	0
445 Pacific Lutheran U	37	158	87	0	25	33	244	10
446 University of Dallas	34	0	0	0	0i	0i	0i	0i
447 Grand Valley State U	30	0	10	0	0	0	0	7
448 New York Inst Technology	30	41	174	141	94i	47i	0	0
449 Pittsburg State U	30	0	0	220	195i	170i	145i	120i
450 SUNY Col Oneonta	21	25	39	1e	1e	1	22	0
Total, 1st 450 institutions	13,681,637	13,235,350	12,551,927	11,860,579	11,026,108	10,108,652	9,527,327	8,882,705

See explanatory information and SOURCE at end of table

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Table B-33. Federally financed R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
451 CA Sch Prof Psy Brk,Alm	20	27	0	0	0	0	0	0
452 Pont Catholic U of PR	20e	20	0	0	68	214	265	492
453 Wheeling Jesuit U	20e	20i	20	20	--	--	--	--
454 Long Island University	14	77	145	109	142	20	57	191
455 West Virginia State Col	10	40	195	161	172	210	138	75
456 University of Bridgeport	7	104	22	27	--	--	--	--
457 Southwest State U	6	0	0	0	--	--	--	--
458 SUNY Col Potsdam	2	45	0	48	74	11	22	27
459 Antioch University	0	81	85	116	87	0	0	0
460 Benedictine University	0	0	0	27	20i	15i	10i	5i
Total, 1st 460 institutions	13,681,736	13,235,764	12,552,394	11,861,087	11,026,671	10,109,122	9,527,819	8,883,495
461 Biola University	0	0	0	0	0	0	0	0
462 CA Inst of Integral Stu	0	0	0	0	--	--	--	--
463 CA Sch Prof Psy L A	0i	0i	0	0	50	245	1,163	1,383
464 CUNY NY City Tech Col	0	0	0	66	--	--	--	--
465 Central Missouri St U	0	0	49	13	--	--	--	--
466 Forest Inst of Prof Psy	0	0	0	0	--	--	--	--
467 Fuller Theological Sem	0	0i	0	80	40	0	0	3
468 Golden Gate University	0	0	0	0	--	--	--	--
469 Institute of Textile Tech	0	0	0	0	0	0	0	0
470 MA Col Phar Allied H'th	0	0	0	0	0	0	0i	0
Total, 1st 470 institutions	13,681,736	13,235,764	12,552,443	11,861,246	11,026,761	10,109,367	9,528,982	8,884,881
471 Maharishi U of Mgmt	0	640	776	0e	--	--	--	--
472 Notre Dame College	0	0i	0	51	--	--	--	--
473 Oral Roberts University	0	0	28	0	0	0	0	290
474 Pace University All Cmp	0	0	0e	0e	--	--	--	--
475 Pacific University	0	0	0	0	0i	0i	0i	0i
476 Pepperdine University	0	0	0	0	--	--	--	--
477 Quinnipiac College	0	0	0	0	0	0	0	0
478 Rust College	0	332	389	346	798	271	156	214
479 SUNY Inst of Tech Utica	0	0	0	0e	--	--	--	--
480 Spalding University	0	15	5	0	--	--	--	--
Total, 1st 480 institutions	13,681,736	13,236,751	12,553,641	11,861,643	11,027,559	10,109,638	9,529,138	8,885,385
481 Talladega College	0	0	0	0	0	0	0	350
482 The Union Institute	0	0	0	0	0	0	0	0
483 Trenholm State Tech Col	0	0	0	0	0	100	5	5
484 U CA, Office of the Pres	0	0	0	0	0	0	0	0
485 U Osteo Med & Hlth Sci	0	0	327	343	0	0	43	86
486 U WI Platteville	0	0	0	0	0	1	0	0
487 U of Missouri Sys Admn	0	0	0	0	0	20	116	678
488 US International U	0	0	0	0	0	0	88	61
489 Voorhees College	0	0	0	0	0	0	0	211
490 WV Sch of Osteo Med	0	0	0	0	0	14	23	30
Total, 1st 490 institutions	13,681,736	13,236,751	12,553,968	11,861,986	11,027,559	10,109,773	9,529,413	8,886,806
491 Webb Institute	0	0	0	8	10i	11i	12i	13i
492 Western Oregon State Col	0	0	20	33	24i	18i	12i	6i
493 Widener U All Campuses	0	0	0	0	0i	0i	0i	0i
Total, 1st 493 institutions	13,681,736	13,236,751	12,553,988	11,862,027	11,027,593	10,109,802	9,529,437	8,886,825
Total, all other sampled insts	0	0	0	92,064	63,023	123,021	107,295	102,955
Estimated total non-sampled insts.	128,328	118,786	114,298	0	0	0	0	0

1 Johns Hopkins University includes Applied Physics Laboratory, with $420 million in federally financed R&D expenditures.

2 These data do not include R&D expenditures at university-associated federally funded research and development cent- s. See tables B-73 and B-74.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-34. Non-Federal R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
Total, all institutions	9,185,399	8,851,717	8,382,378	7,994,257	7,725,470	7,351,194	6,648,590	5,986,424
1 Texas A&M University	218,308	225,805	218,808	200,158	192,472	190,278	179,799	157,122
2 University of Michigan	187,814	167,114	166,056	175,917	169,607	157,306	130,122	106,030
3 U WI Madison	179,396	174,160	167,315	158,407	152,890	142,837	130,979	116,530
4 University of Georgia	153,103	148,747	132,844	120,189	116,317	117,973	112,878	103,156
5 U CA Berkeley	148,149	133,374	137,104	127,952	135,591	117,777	99,344	85,596
6 Pennsylvania State U	147,250	143,400	134,318	122,507	126,428	121,604	120,270	105,284
7 Ohio State University	143,336	123,627	117,329	112,391	105,351	106,377	99,691	98,001
8 University of Minnesota	142,252	141,705	136,826	157,317	151,100	166,584	148,236	125,734
9 Cornell University	136,452	136,395	118,702	115,720	118,981	136,057	128,895	128,749
10 Louisiana St U, All Camp	131,804	125,267	113,793	106,225	103,203	90,567	87,047	82,243
Total, 1st 10 institutions	1,587,864	1,519,594	1,443,095	1,396,783	1,371,940	1,347,360	1,237,261	1,108,445
11 University of Florida	128,126	119,855	68,962	71,262	72,599	73,480	75,064	65,039
12 University of Arizona	125,652	123,560	124,243	122,105	116,087	111,908	102,713	93,586
13 U CA Davis	124,416	121,471	117,429	118,503	117,964	120,703	120,651	107,579
14 U of Illinois Urbana	122,805	107,096	106,673	111,662	122,854	124,632	108,466	96,192
15 U CA Los Angeles	118,010	101,895	89,667	88,909	90,211	82,148	82,353	68,826
16 Rutgers the State U NJ	117,515	119,696	105,062	105,856	105,464	102,513	97,008	88,678
17 U MD College Park	117,269	115,874	112,297	144,303	136,572	128,566	99,612	90,586
18 NC State U Raleigh	116,263	111,516	103,799	93,154	92,507	95,712	87,346	85,658
19 Purdue University	115,319	110,163	90,585	76,078	72,036	68,515	65,915	60,344
20 Georgia Institute of Tech	109,478	106,983	96,555	77,475	78,968	75,253	73,351	76,616
Total, 1st 20 institutions	2,782,717	2,657,703	2,458,367	2,406,090	2,377,232	2,330,790	2,149,740	1,941,549
21 MA Institute of Tech	109,068	97,257	104,050	109,999	95,936	85,868	77,954	72,017
22 Michigan State University	105,346	104,510	89,430	80,567	75,842	71,603	68,766	69,715
23 U CA San Francisco	98,893	105,471	99,141	104,451	93,501	77,764	63,021	59,540
24 Iowa State University	97,010	96,166	99,543	97,764	87,436	91,864	82,227	74,346
25 University of Connecticut	94,513	89,860	88,454	84,003	78,043	77,638	74,455	63,144
26 U TX Austin	93,798	84,737	111,016	110,032	103,931	123,851	118,610	99,026
27 U of Washington	93,777	97,876	72,912	66,510	55,674	53,299	41,960	39,259
28 Duke University	92,604	70,177	71,870	66,057	62,936	49,353	34,655	32,054
29 Baylor Col of Medicine	92,319	96,178	94,461	84,629	82,264	82,332	79,329	65,345
30 U of Missouri Columbia	89,736	90,450	89,957	76,581	69,195	69,285	63,759	51,743
Total, 1st 30 institutions	3,749,781	3,590,385	3,379,201	3,286,683	3,181,990	3,113,647	2,854,476	2,567,738
31 Johns Hopkins Univ	88,349	82,638	72,351	71,914	68,846	68,856	69,064	58,211
32 Northwestern University	86,452	83,344	86,265	84,612	72,734	82,091	70,968	61,481
33 U CA San Diego	79,592	72,888	65,735	63,902	62,271	60,971	54,477	45,512
34 Harvard University	79,396	72,457	88,276e	75,238	78,494	73,925	66,722	66,068
35 U TX MD Anderson Cncr	78,170	77,470	79,941	86,317	77,629	76,674	62,394	56,911
36 U of Tennessee System	75,607	75,022	71,052	67,084	59,193	64,843	58,000	55,451
37 University of Colorado	73,784	74,266	76,104	54,633	46,372	41,458	38,329	34,575
38 U of Iowa	72,582	61,778	57,500	55,328	47,058	43,051	36,732	31,629
39 U of Pennsylvania	72,263	71,498	65,052	60,236	62,850	53,770	55,643	49,934
40 U of Nebraska Lincoln	70,108	70,824	67,275	71,029	66,045	60,030	54,912	42,478
Total, 1st 40 institutions	4,526,084	4,332,570	4,108,752	3,976,976	3,823,482	3,739,316	3,421,717	3,069,988
41 The Rockefeller Univ	68,226	60,355	34,468	37,542	37,270	37,331	38,457	32,753
42 University of Kentucky	67,271	61,920	56,738	56,137	52,416	49,501	45,347	42,522
43 University of Oklahoma	66,392	65,225	60,481	58,721	62,413	53,991	41,774	36,936
44 Wayne State University	65,887	59,894	51,278	45,260	45,558	39,414	33,967	31,354
45 U of Southern California	64,977	58,553	57,540	50,857	53,027	43,365	45,388	43,008
46 U of South Florida	64,406	63,200	66,276	58,604	50,703	49,370	45,923	34,397
47 Indiana University	64,067	59,471	54,960	50,500	47,694	40,630	32,036	23,459
48 VA Polytech Inst & St U	63,496	69,427	74,823	74,063	79,713	77,390	75,474	65,669
49 Washington University	63,443	62,179	54,079	49,847	46,476	47,989	45,490	31,590
50 University of IL Chicago	62,549	61,853	56,667	55,507	53,783	47,317	41,300	40,041
Total, 1st 50 institutions	5,176,798	4,954,647	4,676,062	4,514,014	4,352,535	4,225,614	3,866,873	3,451,717

See explanatory information and SOURCE at end of table.

Table B-34. Non-Federal R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
51 University of Kansas	58,791	58,493	54,885	47,396	43,012	39,563	34,358	30,691
52 Oklahoma State University	57,926	56,955	50,368	52,080	55,854	51,736	47,941	39,539
53 Yale University	57,907	56,951	53,514	57,950	54,224	44,387	35,744	32,304
54 U of MD Baltimore	56,996	48,278	51,139	58,216	52,224	56,481	44,848	39,884
55 Clemson University	56,727	54,149	52,439	55,270	58,808	53,642	52,443	44,215
56 Auburn University	55,957	58,022	57,022	50,713	51,358	54,634	52,166	38,635
57 New York University	55,864	55,176	50,189	36,141	35,318	30,210	27,755	23,308
58 University of Virginia	54,264	51,435	45,834	42,374	41,952	35,673	38,014	30,067
59 Emory University	53,931	55,454	47,451	39,701	31,504	31,354	30,407	18,216
60 Colorado State University	51,771	46,956	45,993	46,652	42,660	24,785	23,223	17,779
Total, 1st 60 institutions	5,736,932	5,496,516	5,184,896	5,000,507	4,819,449	4,648,079	4,253,772	3,766,355
61 U of NC Chapel Hill	51,495	52,492	52,575	48,237	47,775	39,196	30,645	28,817
62 Oregon State University	51,357	54,715	54,703	52,886	47,834	45,100	40,144	42,243
63 U Med & Dent NJ	51,030	50,631	46,179	40,886	45,413	42,019	38,604	26,468
64 SUNY Buffalo	49,888	68,055	59,278	47,480	50,800	44,496	42,314	35,838
65 Washington State U	49,834	47,767	49,128	48,756	46,867	42,987	39,972	32,476
66 Mississippi State U	49,487	38,987	42,283	40,684	36,008	38,584	37,066	35,976
67 U TX SW Med Ctr Dallas	48,694	46,409	46,930	46,315	40,764	36,765	30,954	28,666
68 SUNY Stony Brook	46,807	46,106	40,578	39,794	35,298	31,813	26,325	29,729
69 U CA Irvine	46,653	40,253	37,533	36,085	33,944	29,871	25,582	20,314
70 Kansas State University	46,453	45,837	44,149	42,980	39,140	37,284	34,660	31,351
Total, 1st 70 institutions	6,228,630	5,987,768	5,658,232	5,444,610	5,243,292	5,036,194	4,600,038	4,078,233
71 Arizona State University	45,706	41,794	31,864	36,110	36,198	37,243	33,259	22,196
72 Carnegie Mellon U	44,684	40,901	34,790	39,595	40,723	37,740	35,651	36,556
73 U of Alabama Birmingham	44,389	51,339	43,016	39,028	35,452	37,000	36,117	32,462
74 U CA Riverside	43,768	37,412	37,252	39,939	40,369	41,213	39,086	37,629
75 U Arkansas Main	43,734	42,179	41,775	43,927	32,347	28,460	26,132	23,887
76 Stanford University	43,180	45,714	50,002	52,297	102,293	71,722	43,690	47,344
77 Princeton University	42,994	40,254	40,743	41,192	38,236	39,667	39,955	35,738
78 U of Alaska Fairbanks	41,030	34,931	35,323	25,180	35,815	33,097	33,675	30,042
79 Columbia University	40,751	38,496	33,316	22,014	24,739	31,105	26,499	25,433
80 University of Pittsburgh	39,866	41,970	36,388	36,844	36,173	30,390	27,016	30,048
Total, 1st 80 institutions	6,658,732	6,402,758	6,042,701	5,820,736	5,665,637	5,423,831	4,941,118	4,399,568
81 University of New Mexico	39,768	38,457	38,535	33,870	32,830	37,203	32,279	29,036
82 University of Idaho	39,717	34,290	32,752	28,778	27,539	24,258	21,124	19,672
83 Florida State University	38,598	40,113	36,813	24,239	22,529	25,316	30,006	29,747
84 Utah State University	37,945	34,037	32,957	30,409	34,872	32,405	27,485	27,495
85 University of Cincinnati	36,725	36,052	37,238	35,118	33,904	33,153	29,495	29,233
86 U MA Amherst	35,709	33,956	32,614	32,046	29,582	..	..	..
87 U TX Med Br Galveston	35,436	39,365	39,998	37,443	33,391	24,112	18,917	15,565
88 Tulane University	33,940	39,394	41,531	38,694	38,886	35,068	28,076	21,100
89 Virginia Commonwealth U	33,564	29,835	28,674	28,320	23,298	20,634	21,124	17,042
90 Case Western Reserve U	33,534	33,897	35,970	32,824	35,004	27,809	22,869	17,536
Total, 1st 90 institutions	7,023,668	6,762,154	6,399,783	6,142,477	5,977,472	5,683,789	5,172,493	4,605,994
91 University of Miami	33,340	31,625	29,912	29,403	22,309	27,132	26,200	27,197
92 Univ of Hawaii Manoa	33,104	34,191	30,687	32,599	32,574	33,309	33,860	30,159
93 Montana St U Bozeman	32,430	30,765	20,411	18,815	20,976	20,169	18,596	17,187
94 University of Rochester	31,981	32,642	31,622	30,912	29,579	24,903	23,367	22,948
95 North Dakota State U	31,978	28,993	26,100	26,215	25,789	24,835	6,051	5,141
96 U TX Hlth Sci Ctr San Ant	31,825	32,903	31,864	26,772	24,131	18,998	16,232	13,177
97 Georgetown University	30,878	28,093	27,669	25,322	22,278	18,857	14,774	16,246
98 CUNY Mt Sinai Sch Med	30,806	33,017	30,991	25,537	24,708	24,275	20,145	19,623
99 Texas Tech University	29,987	29,374	28,095	27,222	25,748	25,671	24,775	22,987
100 Oregon Health Sciences U	28,995	25,297	20,246	17,947	15,765	12,764	14,179	10,935
Total, 1st 100 institutions	7,338,992	7,069,054	6,677,380	6,403,221	6,221,329	5,914,702	5,370,672	4,791,594

See explanatory information and SOURCE at end of table.

Table B-34. Non-Federal R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
101 U of NE Med Ctr Omaha	28,583	24,912	21,741	21,538	21,824	17,340	8,766	8,719
102 Temple University	27,813	26,439	29,168	27,138	27,052	26,048	23,285	20,250
103 U of South Carolina	27,350	35,418	36,083	28,812	30,617	32,007	26,890	22,825
104 U of Nevada Reno	27,006	25,406	23,377	21,467	23,461	18,445	9,527	9,494
105 Rush University	26,292	26,198	24,905	21,252	17,054	20,349	15,201	14,159
106 San Diego St University	26,020	18,851	17,041	15,631	15,004	11,826	7,877	7,076
107 Tufts University	25,848	26,612	24,077	21,894e	18,779e	8,635	8,719	9,653
108 University of Wyoming	25,562	25,097	23,349	17,981	16,883	10,227	10,624	9,506
109 Brown University	25,482	18,837	18,282	18,301	17,729	13,932	9,844	9,058
110 U PR Mayaguez	24,934	22,345	13,598	14,669	16,121	16,170i	16,218	15,229
Total, 1st 110 institutions	7,603,882	7,319,169	6,909,001	6,611,904	6,425,853	6,089,681	5,507,623	4,917,563
111 University of Delaware	24,645	25,809	24,484	26,457	27,341	24,643	22,531	20,111
112 Medical Col of Georgia	24,633	20,362	18,899	17,222	13,679	4,001	4,007	3,971
113 West Virginia University	24,044	22,814	23,982	23,179	24,742	30,104	24,985	21,907
114 University of Houston	23,730	22,360	20,301	20,688	23,076	22,152	20,403	17,871
115 University of Chicago	23,556	21,674	19,372	15,947	20,941	19,606	21,628	18,970
116 U MA Worcester	23,143	25,471	26,867	26,782	17,929	--	--	--
117 New Mexico State Univ	22,941	24,245	20,654	21,153	21,028	21,214	16,600	15,270
118 U of New Hampshire	22,388	21,476	18,675	15,920	12,153	11,075	11,539	9,126
119 Boston University	22,320	20,236	17,953	19,565	17,024	14,715	13,192	9,923
120 University of Vermont	22,138	21,133	18,080	18,309	16,785	15,681	14,607	14,208
Total, 1st 120 institutions	7,837,420	7,544,749	7,118,268	6,817,126	6,620,551	6,252,872	5,657,115	5,048,920
121 UT-Houston Hlth Sci Ctr	21,347	19,902	19,611	20,122	18,784	21,118	16,690	17,360
122 Vanderbilt University	21,319	19,039	17,666	12,498	17,021	9,738	8,315	9,067
123 Allegheny U of Hlth Sci	21,067	17,332	18,894	16,088	16,327	15,362	12,290	12,377
124 University of Utah	20,635	22,088	22,508	22,026	29,100	25,852	26,721	21,521
125 Sthrn IL U Carbondale	19,742	19,531	20,566	18,939	20,712	21,248	17,838	16,786
126 Wake Forest University	19,486	17,669	15,859	15,785	12,414	10,829	9,472	8,645
127 U CA Santa Cruz	19,335	18,251	18,655	16,065	16,176	15,815	12,492	11,108
128 SUNY Col Env Sci Frstry	18,948	18,718i	18,488	18,679	16,029	16,923	16,698	15,338
129 George Washington U	18,773	15,457	14,050	13,479	11,177	6,076	5,555	5,064
130 NJ Inst of Technology	18,549	15,831	17,411	15,506	15,348	12,383	12,494	10,320
Total, 1st 130 institutions	8,036,621	7,728,567	7,301,976	6,986,313	6,793,639	6,408,216	5,795,680	5,176,506
131 U of Maine	18,473	16,112	18,007	15,920	14,238	17,020	14,559	11,686
132 Yeshiva University	18,034	22,607e	22,163	17,865	19,044	18,890	18,902	16,272
133 U CA Santa Barbara	17,884	15,294	14,283	14,718	13,230	12,946	11,877	10,840
134 SUNY Albany	17,852	14,303	19,746	10,542	9,868	8,376	7,537	9,069
135 Thomas Jefferson U	17,679	16,370	13,717	12,813	12,468	9,966	8,518	8,094
136 U Arkansas Medical Sci	16,558	12,272	9,352	4,722	6,247	6,443	5,244	5,576
137 University of Louisville	16,349	13,053	11,201	10,572	10,133	10,102	7,284	8,513
138 Syracuse University	15,961	14,598	19,341	15,625	17,430	16,414	14,887	15,176
139 U MD Center for EES	15,450	15,148	14,365	13,642	14,236	13,348	13,273	11,222
140 U MD Biotechnology Inst	15,404	11,025	8,760	--	--	--	--	--
Total, 1st 140 institutions	8,206,269	7,879,349	7,452,911	7,102,732	6,910,533	6,521,721	5,897,761	5,272,954
141 U of Missouri Rolla	15,065	15,386	13,234	11,897	10,800	10,072	10,422	14,233
142 Loyola U of Chicago	14,634	13,938i	13,243	11,002	12,028	7,999	6,057	5,252
143 California Inst of Tech	14,531	17,293	15,444	11,551	12,535	14,706	15,153	14,564
144 Med U of South Carolina	13,789	21,078	17,742	21,072	14,726	11,510	12,218	11,470
145 Brandeis University	13,527	13,710	13,250	14,388	13,429	12,557	12,062	11,516
146 The University of Memphis	13,475	10,077	9,278	8,236	8,583	9,046	9,407	7,593
147 NM Inst Mining & Tech	13,375	11,137	13,363	18,667	17,526	17,413i	17,301	15,106
148 Dartmouth College	13,263	11,466	16,083	15,828	14,877	15,067	13,602	11,230
149 Rensselaer Polytech Inst	13,169	12,997	15,101	22,026	26,456	26,734	24,071	19,662
150 SUNY Hlth Sci Ctr Brklyn	12,848i	12,407	11,078	9,729	8,275	14,875	8,299	8,971
Total, 1st 150 institutions	8,343,941	8,018,838	7,590,727	7,247,128	7,049,768	6,661,700	6,026,353	5,392,551

See explanatory information and SOURCE at end of table

Table B-34. Non-Federal R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
151 SUNY Binghamton	12,839	11,447	10,703	8,755	8,232	6,740	6,978	6,356
152 Medical Col of Wisconsin	12,838	13,071	18,145	17,428	15,911	15,384	13,028	13,519
153 Lehigh University	12,371	13,707	13,825	14,831	14,396	16,042	16,013	16,079
154 Georgia State University	12,296	11,590	10,329	6,307	6,005	5,755	5,321	4,493
155 Unif Svcs U of Hlth Sci	12,230	13,754	9,210	8,527	7,498i	6,468i	5,438i	4,408i
156 Col of William & Mary	12,163	8,866	10,017	11,458	10,681	11,225	11,332	10,045
157 U of Alabama Huntsville	12,035	11,319	9,899	9,170	7,585	7,136	8,210	8,185
158 U WI Milwaukee	11,653	11,935	11,203	10,790	10,926	10,057	8,924	7,981
159 Woods Hole Oceanograph	11,195	7,476	7,126	7,973	8,616	9,825e	9,391	10,548
160 University of Akron	10,714	11,358	12,767	13,229	10,582	9,994	7,367	7,203
Total, 1st 160 institutions	8,464,275	8,133,361	7,703,951	7,355,596	7,150,200	6,760,326	6,118,355	5,481,368
161 U Mississippi, All Camp	10,644	9,396	9,164	8,817	7,264	7,811	7,098	6,251
162 U of Southwestern LA	10,493	11,109	9,101	10,189	9,808	9,303	7,445	5,999
163 Ohio University	10,283	12,126	10,589	10,284	9,955	8,257	8,842	7,739
164 Oregon Grad Inst Sci Tech	10,197	10,629	10,401	8,697	5,194	4,198	2,425	2,243
165 Michigan Tech University	9,904	9,991	10,802	8,919	9,937	12,797	9,992	9,976
166 The University of Montana	9,830	8,732	8,233	7,866	5,153	4,179	3,864	3,711
167 Colorado School of Mines	9,757	7,738i	5,719	6,594	6,435	6,484	5,633	4,929
168 The University of Alabama	9,568	11,243	10,478	14,566	15,696	15,821	14,547	11,853
169 South Dakota State U	9,425	7,826	8,372	9,017	7,941	7,409	5,845	5,218
170 Clark Atlanta University	9,221	9,424	1,684	1,573	1,498	2,117	1,841i	1,562i
Total, 1st 170 institutions	8,563,597	8,231,575	7,788,494	7,442,118	7,229,081	6,838,702	6,185,887	5,540,849
171 U TX Arlington	9,206	12,443	12,816	10,839	10,600	10,146	3,934	5,658
172 CUNY Hunter College	8,938	6,269	5,108	3,506	3,252	2,551	2,397	2,461
173 University of Dayton	8,775	8,242	7,774	6,719	6,082	6,793	7,133	5,334
174 Old Dominion University	8,311	6,471	7,023	7,047	4,575	3,464	3,442	2,932
175 U MA Boston	8,192	6,692	8,580	7,612	5,955	--	--	--
176 U TX Dallas	7,979	7,623i	7,268	5,340	5,319	5,749	6,187	4,453
177 U of Missouri Kansas City	7,952	7,221	6,662	6,009	5,470	5,177	5,543	5,535
178 Tennessee Tech U	7,938	9,002	8,149	8,212	8,338	8,939	8,345	6,796
179 Wright State University	7,879	9,042	9,764	9,710	8,138	6,599	6,025	5,329
180 University of North Texas	7,758	6,920	7,252	6,749	8,769	8,638	7,767	6,308
Total, 1st 180 institutions	8,646,525	8,311,500	7,868,890	7,513,861	7,295,579	6,896,758	6,236,660	5,585,655
181 Drexel University	7,709	9,945	9,880	8,979	13,315	12,146	13,318	11,612
182 Wichita State University	7,708	7,140	5,731	4,092	3,710	3,414	2,155	1,522
183 U MA Lowell	7,577	7,408	7,874	8,333	8,008	5,862	6,629	5,268
184 Inst Paper Sci and Tech	7,542i	7,299	7,366	7,033	6,157	6,479	4,796	4,849
185 Eastern VA Med School	7,527	7,999	7,711	6,065	4,272	4,019	2,714	1,238
186 SUNY Hlth Sci Ctr Syrcse	7,329	6,323	5,196	5,215	5,492	3,897	4,436	21,605
187 Cleveland State U	7,296i	7,039	5,950	4,616	5,897	5,677	5,004	4,810
188 University of Oregon	7,243	6,597	8,966	9,273	9,240	6,840	6,195	5,190
189 Northern Illinois U	6,865	6,836	5,207	5,552	5,324	5,457	5,679	4,356
190 George Mason University	6,800	7,282	6,192	5,332	3,491	4,125	5,517	3,049
Total, 1st 190 institutions	8,720,121	8,385,368	7,938,963	7,578,351	7,360,485	6,954,674	6,293,103	5,649,154
191 Idaho State University	6,678	4,621	4,563	2,970	2,014	1,498	1,085	934
192 Western Michigan U	6,625	6,280	6,446	6,247	4,763	5,166	3,672	2,615i
193 Creighton University	6,595	6,562	4,992	5,147	4,569	5,744	6,524	5,548
194 Rice University	6,458	8,017	7,637	8,387	8,068	7,739	6,270	5,223
195 Miami University (OH)	6,214	4,823	3,942	2,576	2,054	1,037	838	705
196 U MD Baltimore County	6,169	4,737	2,037	2,699	2,726	2,086	1,238	885
197 Stevens Inst of Tech	6,027	5,089	5,816	3,452	9,145	5,187	3,186	2,441
198 CUNY City College	5,997	7,183	5,246	5,616	4,279	4,231	2,419	2,719
199 U of Nevada Las Vegas	5,751	6,804	5,943	8,788	3,294	1,923	2,179i	2,437i
200 University of Notre Dame	5,670	5,908	6,475	7,330	7,621	7,715	6,506	6,176
Total, 1st 200 institutions	8,782,305	8,445,392	7,992,060	7,631,563	7,409,018	6,997,000	6,327,020	5,678,837
Total, all other sampled insts	284,352	299,193	301,118	362,694	316,452	354,194	321,570	307,587
Estimated total non-sampled insts	118,742	107,132	89,200	0	0	0	0	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-35. R&D expenditures at universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
Total, all institutions	22,995,463	13,810,064	1,725,079	1,575,673	4,232,111	1,652,535
1 Johns Hopkins Univ	798,468	710,119	2,322	12,388	30,668	42,971
2 University of Michigan	468,876	281,062	1,669	34,975	99,971	51,199
3 U WI Madison	412,570	233,174	37,560	13,871	82,751	45,214
4 U of Washington	406,472	312,695	8,307	36,180	42,531	6,759
5 MA Institute of Tech	380,612	271,544	1,652	62,699	16,718	27,999
6 U CA San Diego	371,509	291,917	9,285	15,130	28,003	27,174
7 Texas A&M University	366,983	148,675	84,632	26,947	103,041	3,688
8 U CA Los Angeles	354,645	236,635	7,269	15,788	52,264	42,689
9 University of Minnesota	341,179	198,927	47,842	23,726	46,739	23,945
10 Cornell University	339,534	203,082	36,916	14,915	46,676	37,945
Total, 1st 10 institutions	4,240,848	2,887,830	237,454	256,619	549,362	309,583
11 Pennsylvania State U	337,938	190,688	11,237	52,771	83,242	0
12 Stanford University	324,821	281,641	777	18,387	3,657	20,359
13 U CA San Francisco	320,757	221,864	11,771	16,989	31,265	38,868
14 U CA Berkeley	316,320	168,171	37,004	15,128	72,549	23,468
15 U of Pennsylvania	288,430	216,167	7,267	9,445	25,346	30,205
16 Harvard University	282,443	203,047	48	2,137	60,239	16,972
17 University of Arizona	279,656	154,004	5,836	13,106	96,305	10,405
18 U of Illinois Urbana	267,008	144,203	30,929	12,365	67,016	12,495
19 Ohio State University	262,147	118,811	37,391	30,870	51,357	23,718
20 U CA Davis	254,604	130,188	16,354	9,387	79,386	19,289
Total, 1st 20 institutions	7,174,972	4,716,614	396,068	437,204	1,119,724	505,362
21 University of Colorado	251,301	177,517	5,295	8,902	26,964	32,623
22 U of Southern California	244,258	179,281	5,154	21,592	38,231	0
23 Duke University	242,235	149,631	5,425	42,797	17,887	26,495
24 U TX Austin	241,606	147,808	17,241	15,029	19,582	41,946
25 Columbia University	236,403	195,652	2,852	2,559	10,200	25,140
26 Yale University	234,901	176,994	3,195	15,322	16,030	23,360
27 Georgia Institute of Tech	225,633	116,155	6,818	39,136	63,524	0
28 Washington University	218,640	155,197	4,706	18,700	17,026	23,011
29 U MD College Park	216,957	99,688	57,081	24,044	36,144	0
30 University of Florida	213,099	84,973	11,971	9,532	98,085	8,538
Total, 1st 30 institutions	9,500,005	6,199,510	515,806	634,817	1,463,397	686,475
31 University of Georgia	209,357	56,254	42,161	9,861	100,248	833
32 U of NC Chapel Hill	208,529	157,034	24,934	2,592	23,969	0
33 Purdue University	206,951	91,632	20,366	25,720	68,779	454
34 Louisiana St U, All Camp	196,328	64,524	65,425	11,298	42,125	12,956
35 NC State U Raleigh	190,748	74,485	70,474	26,067	19,135	587
36 University of Pittsburgh	189,826	149,960	1,920	7,880	16,466	13,600
37 Northwestern University	187,262	100,810	3,396	9,378	54,473	19,205
38 Rutgers the State U NJ	185,103	67,588	26,554	7,079	73,829	10,053
39 Baylor Col of Medicine	184,613	92,294	3,872	13,655	23,428	51,364
40 Michigan State University	182,589	77,243	31,362	6,818	54,099	13,067
Total, 1st 40 institutions	11,441,311	7,131,334	806,270	755,165	1,939,948	808,594
41 U of Iowa	178,228	105,646	5,740	14,862	38,525	13,455
42 U of Alabama Birmingham	170,193	125,804	2,205	17,354	13,488	11,342
43 California Inst of Tech	157,005	142,474	927	4,447	7,085	2,072
44 Indiana University	154,948	90,881	2,935	5,357	36,615	19,160
45 Iowa State University	151,914	54,904	43,716	7,407	40,843	5,044
46 U of Tennessee System	149,331	73,724	26,147	11,759	28,538	9,163
47 Emory University	149,168	95,237	5,396	6,383	19,717	22,435
48 University of Connecticut	147,522	53,009	16,653	8,026	61,755	8,079
49 New York University	145,874	90,010	1,610	10,461	18,514	25,279
50 University of Rochester	144,914	112,933	8,513	11,605	4,346	7,517
Total, 1st 50 institutions	12,990,408	8,075,956	920,112	852,826	2,209,374	932,140

See explanatory information and SOURCE at end of table.

Table B-35. R&D expenditures at universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
51 VA Polytech Inst & St U	143,815	80,319	28,776	11,365	19,905	3,450
52 Case Western Reserve U	143,435	109,901	3,968	5,784	12,333	11,449
53 SUNY Buffalo	137,701	87,813	589	13,186	13,497	22,616
54 University of Chicago	137,679	114,123	1,508	1,306	7,678	13,064
55 Carnegie Mellon U	136,514	91,830	8,460	21,521	5,206	9,497
56 University of Virginia	134,853	80,589	5,764	17,847	14,962	15,691
57 Oregon State University	131,334	79,977	29,177	728	12,982	8,470
58 U TX SW Med Ctr Dallas	130,162	81,468	7,206	13,801	1,109	26,578
59 University of Miami	130,056	96,716	1,516	12,321	7,457	12,046
60 Colorado State University	126,701	74,930	21,979	6,320	22,976	496
Total, 1st 60 institutions	14,342,658	8,973,622	1,029,055	957,005	2,327,479	1,055,497
61 SUNY Stony Brook	126,377	79,570	4,260	5,848	30,704	5,995
62 U of Missouri Columbia	123,133	33,397	16,201	8,164	57,357	8,014
63 U of MD Baltimore	122,207	65,211	17,246	19,450	10,122	10,178
64 University of IL Chicago	121,540	58,991	2,112	6,746	43,308	10,383
65 U TX MD Anderson Cncr	120,964	42,794	0	0	47,699	30,471
66 U CA Irvine	119,647	72,994	5,519	10,391	17,560	13,183
67 University of Kentucky	118,721	51,450	11,397	13,374	39,227	3,273
68 Vanderbilt University	117,003	95,684	88	3,097	11,223	6,911
69 University of New Mexico	116,618	76,850	3,332	2,389	27,858	6,189
70 University of Utah	114,423	93,788	741	3,825	9,373	6,696
Total, 1st 70 institutions	15,543,291	9,644,351	1,089,951	1,030,289	2,621,910	1,156,790
71 Georgetown University	112,582	81,704	209	6,737	15,235	8,697
72 Princeton University	112,380	69,386	637	4,483	27,244	10,630
73 Wayne State University	112,151	46,264	11,569	8,977	34,784	10,557
74 Boston University	110,267	87,947	509	8,726	0	13,085
75 University of Oklahoma	109,071	42,679	14,386	6,650	33,823	11,533
76 The Rockefeller Univ	105,595	37,369	2,237	2,800	28,394	34,795e
77 U of Nebraska Lincoln	102,460	32,352	36,751	3,465	28,209	1,683
78 University of Kansas	100,649	41,858	7,621	9,356	36,473	5,341
79 Washington State U	98,641	48,807	3,049	3,149	34,042	9,594
80 U Med & Dent NJ	98,535	47,505	7,900	7,741	27,966	7,423
Total, 1st 80 institutions	16,605,622	10,180,222	1,174,819	1,092,373	2,888,080	1,270,128
81 U of South Florida	94,157	29,751	8,511	3,282	46,520	6,093
82 CUNY Mt Sinai Sch Med	92,405	61,599	2,727	3,288	11,546	13,245
83 Yeshiva University	91,430	73,396	0	0	15,359	2,675
84 U CA Santa Barbara	91,284	73,400	1,832	2,988	8,457	4,607
85 University of Cincinnati	89,286	52,561	1,848	9,079	18,839	6,959
86 Auburn University	87,358	31,401	634	4,212	46,819	4,292
87 Clemson University	84,836	28,109	16,301	5,887	30,408	4,131
88 Arizona State University	84,653	38,947	1,136	2,758	39,180	2,632
89 Mississippi State U	84,124	34,637	25,660	7,599	7,272	8,956
90 Tulane University	83,660	49,720	2,293	11,276	16,432	3,939
Total, 1st 90 institutions	17,488,815	10,653,743	1,235,761	1,142,742	3,128,912	1,327,657
91 U TX Hlth Sci Ctr San Ant	83,028	51,203	6,642	9,021	11,294	4,868
92 Oklahoma State University	82,960	25,034	15,356	2,334	37,915	2,321
93 UT-Houston Hlth Sci Ctr	82,803	61,456	547	7,403	4,549	8,848
94 Utah State University	81,709	43,764	15,701	4,614	15,828	1,802
95 Oregon Health Sciences U	80,333	51,338	54	4,597	19,660	4,684
96 Tufts University	79,356	53,508	626	4,970	13,666	6,586
97 Virginia Commonwealth U	79,018	45,454	2,499	7,435	19,245	4,385
98 U of South Carolina	78,619	51,269	4,586	3,657	15,609	3,498
99 Florida State University	78,125	39,527	2,460	1,565	30,186	4,387
100 New Mexico State Univ	76,493	53,552	11,762	2,556	6,704	1,919
Total, 1st 100 institutions	18,291,259	11,129,848	1,295,994	1,190,894	3,303,568	1,370,955

See explanatory information and SOURCE at end of table.

Table B-35. R&D expenditures at universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
101 Wake Forest University	75,331	55,845	420	12,697	3,104	3,265
102 U TX Med Br Galveston	73,759	38,323	11,421	6,008	10,118	7,889
103 U MA Amherst	73,678	37,969	5,933	5,738	17,503	6,535
104 Univ of Hawaii Manoa	73,302	40,198	24,736	453	3,186	4,727
105 Woods Hole Oceanograph	73,015	61,820	336	697	1,764	8,398
106 U CA Riverside	71,495	27,727	3,970	1,702	33,587	4,509
107 U of Alaska Fairbanks	71,381	30,351	5,842	9,965	25,217	6
108 Kansas State University	71,222	24,769	29,835	2,243	12,275	2,100
109 Thomas Jefferson U	69,154	51,475	54	9,553	68	8,004
110 Brown University	67,621	42,139	238	1,716	21,402	2,126
Total, 1st 110 institutions	19,011,217	11,540,464	1,378,781	1,241,666	3,431,792	1,418,514
111 SUNY Albany	66,247	48,395	3,085	1,904	5,186	7,677
112 U MA Worcester	63,341	40,198	0	1,146	18,176	3,821
113 U Arkansas Main	59,753	16,019	25,330	4,474	11,995	1,935
114 Temple University	56,533	28,720	583	5,173	19,699	2,358
115 University of Idaho	56,198	16,481	19,634	6,478	13,158	447
116 West Virginia University	54,844	30,800	2,289	3,608	14,322	3,825
117 Med U of South Carolina	54,426	40,637	0	1,134	2,579	10,076
118 University of Delaware	54,154	29,509	2,410	2,964	13,074	6,197
119 University of Vermont	53,659	31,521	2,524	5,231	10,660	3,723
120 Dartmouth College	52,945	39,682	2,081	2,571	2,774	5,837
Total, 1st 120 institutions	19,583,317	11,862,426	1,436,717	1,276,349	3,543,415	1,464,410
121 U CA Santa Cruz	51,062	31,727	1,268	1,032	12,144	4,891
122 Montana St U Bozeman	50,097	17,667	12,163	5,489	14,778	0
123 George Washington U	49,263	30,490	359	5,704	5,039	7,671
124 University of Houston	49,178	25,448	12,778	1,341	6,486	3,125
125 Allegheny U of Hlth Sci	48,790	27,723	4,131	5,060	9,247	2,629
126 Rush University	48,772	22,480	140	5,872	17,201	3,079
127 U of Nevada Reno	47,977	20,971	1,183	1,399	23,671	753
128 Medical Col of Wisconsin	47,365	34,527	2	3,019	4,546	5,271
129 U of New Hampshire	45,693	23,305	1,752	1,315	12,250	7,071
130 U PR Mayaguez	44,502	19,568	20,392	2,275	2,267	0
Total, 1st 130 institutions	20,066,016	12,116,332	1,490,885	1,308,855	3,651,044	1,498,900
131 North Dakota State U	43,661	11,683	1,512	1,534	27,525	1,407
132 San Diego St University	43,201	17,181	10,761	725	11,441	3,093
133 University of Dayton	43,188	34,413	655	6,160	1,769	191
134 Texas Tech University	43,000	13,013	12,023	5,634	9,915	2,415
135 U of NE Med Ctr Omaha	42,612	14,029	6,939	4,286	14,739	2,619
136 Loyola U of Chicago	42,565	27,931	797	4,271	5,372	4,194
137 University of Wyoming	40,553	14,991	3,768	2,086	18,280	1,428
138 Rice University	39,696	33,238	1,889	1,898	0	2,671
139 U of Rhode Island	39,575	36,337	734	324	2,180	0
140 NJ Inst of Technology	39,110	20,561	6,197	2,313	9,194	845
Total, 1st 140 institutions	20,483,177	12,339,709	1,536,160	1,338,086	3,751,459	1,517,763
141 U of Alabama Huntsville	38,176	26,141	1,211	4,752	6,072	0
142 Rensselaer Polytech Inst	37,917	24,748	2,476	6,210	3,747	736
143 Univ Svcs U of Hlth Sci	36,851	24,621	0	0	12,230	0
144 Brandeis University	36,760	23,233	200	0	4,142	9,185
145 Medical Col of Georgia	35,971	11,338	3,128	2,995	17,208	1,302
146 Lehigh University	34,780	22,409	1,937	6,832	3,335	267
147 U of Maine	34,684	16,211	1,594	4,214	12,172	493
148 Clark Atlanta University	34,566	25,345	2,000	790	6,431	0
149 Syracuse University	34,322	18,361	4,800	2,550	5,259	3,352
150 University of Oregon	33,654	26,411	520	341	3,972	2,410
Total, 1st 150 institutions	20,840,858	12,558,527	1,554,026	1,366,770	3,826,027	1,535,508

See explanatory information and SOURCE at end of table.

Table B-35. R&D expenditures at universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt	State & local govts.	Industry	Institutional funds	Other
151 U Arkansas Medical Sci	33,354	16,796	286	3,733	9,189	3,350
152 SUNY Hlth Sci Ctr Brklyn	31,920i	19,072i	72i	5,418i	4,475i	2,883i
153 US Naval Postgrad School	30,706	29,873	270	98	0	465
154 University of Louisville	29,655	13,306	70	6,312	9,967	0
155 Howard University	28,894	26,253	725	1,057	841	18
156 Sthrn IL U Carbondale	28,578	8,836	5,898	2,033	9,227	2,584
157 Univ of North Dakota	28,188	23,976	43	2,971	455	743
158 U Mississippi, All Camp	26,215	15,571	3,388	1,920	4,009	1,327
159 Col of William & Mary	25,183	13,020	2,067	251	9,009	836
160 Saint Louis University	25,099	21,483	243	2,483	743	147
Total, 1st 160 institutions	21,128,650	12,746,713	1,567,088	1,393,046	3,873,942	1,547,861
161 University of Notre Dame	24,556	18,886	77	3,511	2,082	0
162 U TX Arlington	24,010	14,804	4,310	3,245	1,651	0
163 Michigan Tech University	23,882	13,978	1,232	3,749	4,923	0
164 George Mason University	23,230	16,430	605	449	2,619	3,127
165 U MD Biotechnology Inst	22,933	7,529	372	870	13,293	869
166 Florida A&M University	22,474	20,118	2,356	0	0	0
167 CUNY City College	22,166	16,169	2,533	1,039	0	2,425
168 SUNY Col Env Sci Frstry	21,969	3,021	555	1,500	15,977	916
169 The University of Alabama	21,806	12,238	917	1,407	7,244	0
170 U of Central Florida	21,488	18,714	814	1,207	753	0
Total, 1st 170 institutions	21,357,164	12,868,600	1,580,859	1,410,023	3,922,484	1,555,198
171 U MD Center for EES	21,448	5,998	2,943	170	10,177	2,160
172 The University of Montana	21,421	11,591	1,270	1,511	6,355	694
173 Oregon Grad Inst Sci Tech	21,412	11,215	677	2,757	2,426	4,337
174 U of Missouri Rolla	20,652	5,587	487	2,036	9,879	2,663
175 NM Inst Mining & Tech	20,580	7,205	1,748	6,895	4,530	202
176 Desert Research Institute	20,100	14,600	300	5,200	0	0
177 U WI Milwaukee	19,679	8,026	4,039	252	5,751	1,611
178 Drexel University	19,322	11,613	744	4,343	2,622	0
179 Colorado School of Mines	19,291	9,534	732	8,114	911	0
180 SUNY Binghamton	18,500	5,661	3,527	1,799	5,279	2,234
Total, 1st 180 institutions	21,559,569	12,979,630	1,597,326	1,443,100	3,970,414	1,569,099
181 The University of Memphis	18,429	4,954	4,580	536	7,210	1,149
182 Ohio University	18,329	8,046	1,236	2,322	6,446	279
183 Georgia State University	18,114	5,818	1,888	669	8,607	1,132
184 Northeastern University	17,980	14,706	546	2,072	656	0
185 U MA Lowell	17,834	10,257	638	5,779	1,160	0
186 Eastern VA Med School	17,730	10,203	0	5,039	60	2,428
187 Old Dominion University	17,577	9,266	3,888	2,233	2,190	0
188 Wright State University	17,381	9,502	1,198	1,250	4,783	648
189 U of Nevada Las Vegas	16,893	11,142	2,055	1,443	2,253	0
190 Florida International U	16,856	13,415	1,389	527	1,111	414
Total, 1st 190 institutions	21,736,692	13,076,939	1,614,744	1,464,970	4,004,890	1,575,149
191 C R Drew U of Med & Sci	16,386	15,288	0	1,098	0	0
192 New York Medical College	16,372	11,657	206	1,532	0	2,977
193 Illinois Inst of Tech	16,000	11,183	120	4,000	697	0
194 NC A&T State University	15,991	12,521	897	392	1,355	826
195 University of Akron	15,507	4,793	1,698	3,313	4,699	1,004
196 Stevens Inst of Tech	15,249	9,222	1,526	2,087	2,414	0
197 CUNY Hunter College	15,021	6,083	4,214	76	3,210	1,438
198 U PR Med Sci Campus	15,005	12,191	317	0	2,053	444
199 South Dakota State U	14,925	5,500	6,683	707	1,213	822
200 U of South Alabama	14,873	9,747	822	981	2,323	0
Total, 1st 200 institutions	21,892,021	13,175,124	1,631,227	1,480,156	4,022,854	1,582,660
Total, all other sampled insts.	856,372	506,612	78,011	80,520	141,849	49,380
Estimated total non-sampled insts.	247,070	128,328	15,841	14,997	67,408	20,495

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-36. R&D expenditures at public universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts	Industry	Institutional funds	Other
Total, all institutions	15,531,711	8,423,888	1,564,222	1,062,281	3,489,881	991,439
1 University of Michigan	468,876	281,062	1,669	34,975	99,971	51,199
2 U WI Madison	412,570	233,174	37,560	13,871	82,751	45,214
3 U of Washington	406,472	312,695	8,307	36,180	42,531	6,759
4 U CA San Diego	371,509	291,917	9,285	15,130	28,003	27,174
5 Texas A&M University	366,983	148,675	84,632	26,947	103,041	3,688
6 U CA Los Angeles	354,645	236,635	7,269	15,788	52,264	42,689
7 University of Minnesota	341,179	198,927	47,842	23,726	46,739	23,945
8 Pennsylvania State U	337,938	190,688	11,237	52,771	83,242	0
9 U CA San Francisco	320,757	221,864	11,771	16,989	31,265	38,868
10 U CA Berkeley	316,320	168,171	37,004	15,128	72,549	23,468
Total, 1st 10 institutions	3,697,249	2,283,808	256,576	251,505	642,356	263,004
11 University of Arizona	279,656	154,004	5,836	13,106	96,305	10,405
12 U of Illinois Urbana	267,008	144,203	30,929	12,365	67,016	12,495
13 Ohio State University	262,147	118,811	37,391	30,870	51,357	23,718
14 U CA Davis	254,604	130,188	16,354	9,387	79,386	19,289
15 University of Colorado	251,301	177,517	5,295	8,902	26,964	32,623
16 U TX Austin	241,606	147,808	17,241	15,029	19,582	41,946
17 Georgia Institute of Tech	225,633	116,155	6,818	39,136	63,524	0
18 U MD College Park	216,957	99,688	57,081	24,044	36,144	0
19 University of Florida	213,099	84,973	11,971	9,532	98,085	8,538
20 University of Georgia	209,357	56,254	42,161	9,861	100,248	833
Total, 1st 20 institutions	6,118,617	3,513,409	487,653	423,737	1,280,967	412,851
21 U of NC Chapel Hill	208,529	157,034	24,934	2,592	23,969	0
22 Purdue University	206,951	91,632	20,366	25,720	68,779	454
23 Louisiana St U, All Camp	196,328	64,524	65,425	11,298	42,125	12,956
24 NC State U Raleigh	190,748	74,485	70,474	26,067	19,135	587
25 University of Pittsburgh	189,826	149,960	1,920	7,880	16,466	13,600
26 Rutgers the State U NJ	185,103	67,588	26,554	7,079	73,829	10,053
27 Michigan State University	182,589	77,243	31,362	6,818	54,099	13,067
28 U of Iowa	178,228	105,646	5,740	14,862	38,525	13,455
29 U of Alabama Birmingham	170,193	125,804	2,205	17,354	13,488	11,342
30 Indiana University	154,948	90,881	2,935	5,357	36,615	19,160
Total, 1st 30 institutions	7,982,060	4,518,206	739,568	548,764	1,667,997	507,525
31 Iowa State University	151,914	54,904	43,716	7,407	40,843	5,044
32 U of Tennessee System	149,331	73,724	26,147	11,759	28,538	9,163
33 University of Connecticut	147,522	53,009	16,653	8,026	61,755	8,079
34 VA Polytech Inst & St U	143,815	80,319	28,776	11,365	19,905	3,450
35 SUNY Buffalo	137,701	87,813	589	13,186	13,497	22,616
36 University of Virginia	134,853	80,589	5,764	17,847	14,962	15,691
37 Oregon State University	131,334	79,977	29,177	728	12,982	8,470
38 U TX SW Med Ctr Dallas	130,162	81,468	7,206	13,801	1,109	26,578
39 Colorado State University	126,701	74,930	21,979	6,320	22,976	496
40 SUNY Stony Brook	126,377	79,570	4,260	5,848	30,704	5,995
Total, 1st 40 institutions	9,361,770	5,264,509	923,835	645,051	1,915,268	613,107
41 U of Missouri Columbia	123,133	33,397	16,201	8,164	57,357	8,014
42 U of MD Baltimore	122,207	65,211	17,246	19,450	10,122	10,178
43 University of IL Chicago	121,540	58,991	2,112	6,746	43,308	10,383
44 U TX MD Anderson Cncr	120,964	42,794	0	0	47,699	30,471
45 U CA Irvine	119,647	72,994	5,519	10,391	17,560	13,183
46 University of Kentucky	118,721	51,450	11,397	13,374	39,227	3,273
47 University of New Mexico	116,618	76,850	3,332	2,389	27,858	6,189
48 University of Utah	114,423	93,788	741	3,825	9,373	6,696
49 Wayne State University	112,151	46,264	11,569	8,977	34,784	10,557
50 University of Oklahoma	109,071	42,679	14,386	6,650	33,823	11,533
Total, 1st 50 institutions	10,540,245	5,848,927	1,006,338	725,017	2,236,379	723,584

See explanatory information and SOURCE at end of table.

Table B-36. R&D expenditures at public universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts	Industry	Institutional funds	Other
51 U of Nebraska Lincoln	102,460	32,352	36,751	3,465	28,209	1,683
52 University of Kansas	100,649	41,858	7,621	9,356	36,473	5,341
53 Washington State U	98,641	48,807	3,049	3,149	34,042	9,594
54 U Med & Dent NJ	98,535	47,505	7,900	7,741	27,966	7,423
55 U of South Florida	94,157	29,751	8,511	3,282	46,520	6,093
56 U CA Santa Barbara	91,284	73,400	1,832	2,988	8,457	4,607
57 University of Cincinnati	89,286	52,561	1,848	9,079	18,839	6,959
58 Auburn University	87,358	31,401	634	4,212	46,819	4,292
59 Clemson University	84,836	28,109	16,301	5,887	30,408	4,131
60 Arizona State University	84,653	38,947	1,136	2,758	39,180	2,632
Total, 1st 60 institutions	11,472,104	6,273,618	1,091,921	776,934	2,553,292	776,339
61 Mississippi State U	84,124	34,637	25,660	7,599	7,272	8,956
62 U TX Hlth Sci Ctr San Ant	83,028	51,203	6,642	9,021	11,294	4,868
63 Oklahoma State University	82,960	25,034	15,356	2,334	37,915	2,321
64 UT Houston Hlth Sci Ctr	82,803	61,456	547	7,403	4,549	8,848
65 Utah State University	81,709	43,764	15,701	4,614	15,828	1,802
66 Oregon Health Sciences U	80,333	51,338	54	4,597	19,660	4,684
67 Virginia Commonwealth U	79,018	45,454	2,499	7,435	19,245	4,385
68 U of South Carolina	78,619	51,269	4,586	3,657	15,609	3,498
69 Florida State University	78,125	39,527	2,460	1,565	30,186	4,387
70 New Mexico State Univ	76,493	53,552	11,762	2,556	6,704	1,919
Total, 1st 70 institutions	12,279,316	6,730,852	1,177,188	827,715	2,721,554	822,007
71 U TX Med Br Galveston	73,759	38,323	11,421	6,008	10,118	7,889
72 U MA Amherst	73,678	37,969	5,933	5,738	17,503	6,535
73 Univ of Hawaii Manoa	73,302	40,198	24,738	453	3,186	4,727
74 U CA Riverside	71,495	27,727	3,970	1,702	33,587	4,509
75 U of Alaska Fairbanks	71,381	30,351	5,842	9,965	25,217	6
76 Kansas State University	71,222	24,769	29,835	2,243	12,275	2,100
77 SUNY Albany	66,247	48,395	3,085	1,904	5,186	7,677
78 U MA Worcester	63,341	40,198	0	1,146	18,176	3,821
79 U Arkansas Main	59,753	16,019	25,330	4,474	11,995	1,935
80 Temple University	56,533	28,720	583	5,173	19,699	2,358
Total, 1st 80 institutions	12,960,027	7,063,521	1,287,925	866,521	2,878,496	863,564
81 University of Idaho	56,198	16,481	19,634	6,478	13,158	447
82 West Virginia University	54,844	30,800	2,289	3,608	14,322	3,825
83 Med U of South Carolina	54,426	40,637	0	1,134	2,579	10,076
84 University of Delaware	54,154	29,509	2,410	2,964	13,074	6,197
85 University of Vermont	53,659	31,521	2,524	5,231	10,660	3,723
86 U CA Santa Cruz	51,062	31,727	1,268	1,032	12,144	4,891
87 Montana St U Bozeman	50,097	17,667	12,163	5,489	14,778	0
88 University of Houston	49,178	25,448	12,778	1,341	6,486	3,125
89 U of Nevada Reno	47,977	20,971	1,183	1,399	23,671	753
90 U of New Hampshire	45,693	23,305	1,752	1,315	12,250	7,071
Total, 1st 90 institutions	13,477,315	7,331,587	1,343,926	896,512	3,001,618	903,672
91 U PR Mayaguez	44,502	19,568	20,392	2,275	2,267	0
92 North Dakota State U	43,661	11,683	1,512	1,534	27,525	1,407
93 San Diego St University	43,201	17,181	10,761	725	11,441	3,093
94 Texas Tech University	43,000	13,013	12,023	5,634	9,915	2,415
95 U of NE Med Ctr Omaha	42,612	14,029	6,939	4,286	14,739	2,619
96 University of Wyoming	40,553	14,991	3,768	2,086	18,280	1,428
97 U of Rhode Island	39,575	36,337	734	324	2,180	0
98 NJ Inst of Technology	39,110	20,561	6,197	2,313	9,194	845
99 U of Alabama Huntsville	38,176	26,141	1,211	4,752	6,072	0
100 Unif Svcs U of Hlth Sci	36,851	24,621	0	0	12,230	0
Total, 1st 100 institutions	13,888,556	7,529,712	1,407,463	920,441	3,115,461	915,479

See explanatory information and SOURCE at end of table.

Table B-36. R&D expenditures at public universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts	Industry	Institutional funds	Other
101 Medical Col of Georgia	35,971	11,338	3,128	2,995	17,208	1,302
102 U of Maine	34,684	16,211	1,594	4,214	12,172	493
103 University of Oregon	33,654	26,411	520	341	3,972	2,410
104 U Arkansas Medical Sci	33,354	16,796	286	3,733	9,189	3,350
105 SUNY Hlth Sci Ctr Brklyn	31,920i	19,072i	72i	5,418i	4,475i	2,883i
106 US Naval Postgrad School	30,706	29,873	270	98	0	465
107 University of Louisville	29,655	13,306	70	6,312	9,967	0
108 Sthrn IL U Carbondale	28,578	8,836	5,898	2,033	9,227	2,584
109 Univ of North Dakota	28,188	23,976	43	2,971	455	743
110 U Mississippi, All Camp	26,215	15,571	3,388	1,920	4,009	1,327
Total, 1st 110 institutions	14,201,481	7,711,102	1,422,732	950,476	3,186,135	931,036
111 Col of William & Mary	25,183	13,020	2,067	251	9,009	836
112 U TX Arlington	24,010	14,804	4,310	3,245	1,651	0
113 Michigan Tech University	23,882	13,978	1,232	3,749	4,923	0
114 George Mason University	23,230	16,430	605	449	2,619	3,127
115 U MD Biotechnology Inst	22,933	7,529	372	870	13,293	869
116 Florida A&M University	22,474	20,118	2,356	0	0	0
117 CUNY City College	22,166	16,169	2,533	1,039	0	2,425
118 SUNY Col Env Sci Frstry	21,969	3,021	555	1,500	15,977	916
119 The University of Alabama	21,806	12,238	917	1,407	7,244	0
120 U of Central Florida	21,488	18,714	814	1,207	753	0
Total, 1st 120 institutions	14,430,622	7,847,123	1,438,493	964,193	3,241,604	939,209
121 U MD Center for EES	21,448	5,998	2,943	170	10,177	2,160
122 The University of Montana	21,421	11,591	1,270	1,511	6,355	694
123 U of Missouri Rolla	20,652	5,587	487	2,036	9,879	2,663
124 NM Inst Mining & Tech	20,580	7,205	1,748	6,895	4,530	202
125 Desert Research Institute	20,100	14,600	300	5,200	0	0
126 U WI Milwaukee	19,679	8,026	4,039	252	5,751	1,611
127 Colorado School of Mines	19,291	9,534	732	8,114	911	0
128 SUNY Binghamton	18,500	5,661	3,527	1,799	5,279	2,234
129 The University of Memphis	18,429	4,954	4,580	536	7,210	1,149
130 Ohio University	18,329	8,046	1,236	2,322	6,446	279
Total, 1st 130 institutions	14,629,051	7,928,325	1,459,355	993,028	3,298,142	950,201
131 Georgia State University	18,114	5,818	1,888	669	8,607	1,132
132 U MA Lowell	17,834	10,257	638	5,779	1,160	0
133 Old Dominion University	17,577	9,266	3,888	2,233	2,190	0
134 Wright State University	17,381	9,502	1,198	1,250	4,783	648
135 U of Nevada Las Vegas	16,893	11,142	2,055	1,443	2,253	0
136 Florida International U	16,856	13,415	1,389	527	1,111	414
137 NC A&T State University	15,991	12,521	897	392	1,355	826
138 University of Akron	15,507	4,793	1,698	3,313	4,699	1,004
139 CUNY Hunter College	15,021	6,083	4,214	76	3,210	1,438
140 U PR Med Sci Campus	15,005	12,191	317	0	2,053	444
Total, 1st 140 institutions	14,795,230	8,023,313	1,477,537	1,008,710	3,329,563	956,107
141 South Dakota State U	14,925	5,500	6,683	707	1,213	822
142 U of South Alabama	14,873	9,747	822	1,981	2,323	0
143 U MD Baltimore County	14,304	8,135	4,366	1,803	0	0
144 SUNY Hlth Sci Ctr Syrcse	14,093	6,764	841	468	259	5,761
145 U TX Dallas	13,562	5,583	1,432	1,113	2,954	2,480
146 U TX El Paso	13,548	10,471	1,586	428	1,063	0
147 Western Illinois U	13,517	9,016	1,717	109	1,810	865
148 U of Southwestern LA	13,429	2,936	2,514	0	7,037	942
149 Med Col of Ohio Toledo	13,367	9,559	787	308	2,235	478
150 U of Missouri Kansas City	12,803	4,851	694	622	6,202	434
Total, 1st 150 institutions	14,933,651	8,095,875	1,498,979	1,016,249	3,354,659	967,889
Total, all other sampled insts	418,550	240,401	51,247	34,983	75,964	15,955
Estimated total non-sampled insts	179,510	87,612	13,996	11,049	59,258	7,595

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

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SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-37. R&D expenditures at private universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
Total, all institutions	7,463,752	5,386,176	160,857	513,392	742,230	661,097
1 Johns Hopkins Univ	798,468	710,119	2,322	12,388	30,668	42,971
2 MA Institute of Tech	380,612	271,544	1,652	62,699	16,718	27,999
3 Cornell University	339,534	203,082	36,916	14,915	46,676	37,945
4 Stanford University	324,821	281,641	777	18,387	3,657	20,359
5 U of Pennsylvania	288,430	216,167	7,267	9,445	25,346	30,205
6 Harvard University	282,443	203,047	48	2,137	60,239	16,972
7 U of Southern California	244,258	179,281	5,154	21,592	38,231	0
8 Duke University	242,235	149,631	5,425	42,797	17,887	26,495
9 Columbia University	236,403	195,652	2,852	2,559	10,200	25,140
10 Yale University	234,901	176,994	3,195	15,322	16,030	23,360
Total, 1st 10 institutions	3,372,105	2,587,158	65,608	202,241	265,652	251,446
11 Washington University	218,640	155,197	4,706	18,700	17,026	23,011
12 Northwestern University	187,262	100,810	3,396	9,378	54,473	19,205
13 Baylor Col of Medicine	184,613	92,294	3,872	13,655	23,428	51,364
14 California Inst of Tech	157,005	142,474	927	4,447	7,085	2,072
15 Emory University	149,168	95,237	5,396	6,383	19,717	22,435
16 New York University	145,874	90,010	1,610	10,461	18,514	25,279
17 University of Rochester	144,914	112,933	8,513	11,605	4,346	7,517
18 Case Western Reserve U	143,435	109,901	3,968	5,784	12,333	11,449
19 University of Chicago	137,679	114,123	1,508	1,306	7,678	13,064
20 Carnegie Mellon U	136,514	91,830	8,460	21,521	5,206	9,497
Total, 1st 20 institutions	4,977,209	3,691,967	107,964	305,481	435,458	436,339
21 University of Miami	130,056	96,716	1,516	12,321	7,457	12,046
22 Vanderbilt University	117,003	95,684	88	3,097	11,223	6,911
23 Georgetown University	112,582	81,704	209	6,737	15,235	8,697
24 Princeton University	112,380	69,386	637	4,483	27,244	10,630
25 Boston University	110,267	87,947	509	8,726	0	13,085
26 The Rockefeller Univ	105,595	37,369	2,237	2,800	28,394	34,795e
27 CUNY Mt Sinai Sch Med	92,405	61,599	2,727	3,288	11,546	13,245
28 Yeshiva University	91,430	73,396	0	0	15,359	2,675
29 Tulane University	83,660	49,720	2,293	11,276	16,432	3,939
30 Tufts University	79,356	53,508	626	4,970	13,666	6,586
Total, 1st 30 institutions	6,011,943	4,398,996	118,806	363,179	582,014	548,948
31 Wake Forest University	75,331	55,845	420	12,697	3,104	3,265
32 Woods Hole Oceanograph	73,015	61,820	336	697	1,764	8,398
33 Thomas Jefferson U	69,154	51,475	54	9,553	68	8,004
34 Brown University	67,621	42,139	238	1,716	21,402	2,126
35 Dartmouth College	52,945	39,682	2,081	2,571	2,774	5,837
36 George Washington U	49,263	30,490	359	5,704	5,039	7,671
37 Allegheny U of Hlth Sci	48,790	27,723	4,131	5,060	9,247	2,629
38 Rush University	48,772	22,480	140	5,872	17,201	3,079
39 Medical Col of Wisconsin	47,365	34,527	2	3,019	4,546	5,271
40 University of Dayton	43,188	34,413	655	6,160	1,769	191
Total, 1st 40 institutions	6,587,387	4,799,590	127,222	416,228	648,928	595,419
41 Loyola U of Chicago	42,565	27,931	797	4,271	5,372	4,194
42 Rice University	39,696	33,238	1,889	1,898	0	2,671
43 Rensselaer Polytech Inst	37,917	24,748	2,476	6,210	3,747	736
44 Brandeis University	36,760	23,233	200	0	4,142	9,185
45 Lehigh University	34,780	22,409	1,937	6,832	3,335	267
46 Clark Atlanta University	34,566	25,345	2,000	790	6,431	0
47 Syracuse University	34,322	18,361	4,800	2,550	5,259	3,352
48 Howard University	28,894	26,253	725	1,057	841	18
49 Saint Louis University	25,099	21,483	243	2,483	743	147
50 University of Notre Dame	24,556	18,886	77	3,511	2,082	0
Total, 1st 50 institutions	6,926,542	5,041,477	142,366	445,830	680,880	615,989

See explanatory information and SOURCE at end of table

Table B-37. R&D expenditures at private universities and colleges, by source of funds: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Federal Govt.	State & local govts.	Industry	Institutional funds	Other
51 Oregon Grad Inst Sci Tech	21,412	11,215	677	2,757	2,426	4,337
52 Drexel University	19,322	11,613	744	4,343	2,622	0
53 Northeastern University	17,980	14,706	546	2,072	656	0
54 Eastern VA Med School	17,730	10,203	0	5,039	60	2,428
55 C R Drew U of Med & Sci	16,386	15,288	0	1,098	0	0
56 New York Medical College	16,372	11,657	206	1,532	0	2,977
57 Illinois Inst of Tech	16,000	11,183	120	4,000	697	0
58 Stevens Inst of Tech	15,249	9,222	1,526	2,087	2,414	0
59 Boston College	14,504	11,137	40	280	2,365	682
60 Brigham Young University	14,387e	8,752e	682i	1,865i	2,627i	461i
Total, 1st 60 institutions	7,095,884	5,156,453	146,907	470,903	694,747	626,874
61 Mercer University	13,641	10,832	89	1,651	1,069	0
62 Morehouse School of Med	13,206	11,747	0	700	373	386
63 Creighton University	11,641	5,046	1,645	4,517	343	90
64 Meharry Medical College	11,212	11,004	0	0	0	208
65 Polytechnic University	10,964	6,329	556	2,857	1,093	129
66 Loma Linda University	10,837	5,878	0	3,273	1,686	0
67 Inst Paper Sci and Tech	9,939i	2,397i	303i	1,276i	5,352i	611i
68 University of Tulsa	9,565	5,104	730	2,820	911	0
69 Worcester Polytech Inst	9,407	6,967	107	619	1,447	267
70 Tuskegee University	9,061	8,231	0	223	607	0
Total, 1st 70 institutions	7,205,357	5,229,988	150,337	488,839	707,628	628,565
71 Southern Methodist U	9,050	6,007	283	552	1,692	516
72 University of Denver	8,728	7,770	38	311	108	501
73 Clarkson University	8,264	3,794	862	1,779	1,829	0
74 Rochester Inst of Tech	8,118	2,545	351	1,246	3,976e	0
75 Florida Inst of Tech	8,013	2,980	1,707	2,354	276	696
76 Albany Medical College	7,888	6,691	0	0	575	622
77 Catholic U of America	7,427	5,901	112	933	0	481
78 Finch U Hlth Sci Chicago	7,022	5,209	0	137	877	799
79 Marquette University	5,946	2,270	492	1,158	670	1,356
80 Wesleyan University	5,245	3,889	90	30	810	426
Total, 1st 80 institutions	7,281,058	5,277,044	154,272	497,339	718,441	633,962
81 Xavier University of LA	5,188	5,106	46	32	0	4
82 Wellesley College	4,944	2,533	349	97	682	1,283
83 New Sch for Socl Res	4,718i	656i	0i	0i	0i	4,062i
84 Ponce School of Medicine	4,450	4,212	101	0	62	75
85 Alfred University	4,217	600	1,114	1,755	581	167
86 Hampton University	3,854	3,854	0	0	0	0
87 Morris Brown College	3,652	2,422	0	1,230	0	0
88 Bryn Mawr College	3,432	1,039	26	82	2,285	0
89 American University	3,279	2,864	41	17	206	151
90 Texas Christian U	2,787	2,159	142	82	404	0
Total, 1st 90 institutions	7,321,579	5,302,489	156,091	500,634	722,661	639,704
91 Institute of Textile Tech	2,781	0	0	2,742	39	0
92 Fordham University	2,712	1,421	110	0	227	954
93 U Ctrl Del Caribe Esc Med	2,626	2,353	18	0	255	0
94 U of Detroit Mercy	2,555	950	0	1,590	15	0
95 Seton Hall University	2,400e	1,243i	0i	0i	1,157i	0i
96 Hofstra University	2,290	2,290	0	0	0	0
97 Smith College	2,066i	668i	0i	0i	524i	874i
98 Villanova University	2,040	1,390	290	100	260	0
99 Hampshire College	1,978i	586i	0i	0i	95i	1,297i
100 Fisk University	1,969	1,969	0	0	0	0
Total, 1st 100 institutions	7,344,996	5,315,359	156,509	505,066	725,233	642,829
Total, all other sampled insts.	51,196	30,101	2,503	4,378	8,847	5,367
Estimated total non-sampled insts.	67,560	40,716	1,845	3,948	8,150	12,901

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-38. Industry-sponsored R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
Total, all institutions	1,575,673	1,482,863	1,413,716	1,361,024	1,279,681	1,204,677	1,127,736	994,881
1 MA Institute of Tech	62,699	52,757	55,500	58,106	49,828	45,712	43,460	39,650
2 Pennsylvania State U	52,771	50,225	45,408	41,736	42,693	37,587	34,806	30,256
3 Duke University	42,797	32,560	30,241	34,572	31,977	22,876	12,252	12,551
4 Georgia Institute of Tech	39,136	26,104	27,832	28,872	23,776	22,496	21,256	21,346
5 U of Washington	36,180	36,892	33,199	30,780	26,442	26,033	22,215	19,135
6 University of Michigan	34,975	28,987	26,732	26,733	24,992	24,717	27,128	22,023
7 Ohio State University	30,870	21,827	14,883	13,647	13,994	15,409	14,744	20,244
8 Texas A&M University	26,947	31,452	28,576	27,182	28,675	23,050	26,197	21,204
9 NC State U Raleigh	26,067	26,264	22,101	22,229	20,342	20,961	21,398	21,735
10 Purdue University	25,720	25,147	21,639	13,174	12,607	11,962	11,632	11,451
Total, 1st 10 institutions	378,162	332,215	306,111	297,031	275,326	250,803	235,088	219,595
11 U MD College Park	24,044	25,431	18,433	19,271	15,757	11,938	14,229	12,940
12 University of Minnesota	23,726	23,427	23,726	21,524	17,529	19,270	18,086	12,389
13 U of Southern California	21,592	17,668	14,502	13,444	15,529	13,852	18,896	14,716
14 Carnegie Mellon U	21,521	17,763	14,112	18,180	19,003	20,438	20,295	18,976
15 U of MD Baltimore	19,450	17,797	15,411	14,420	13,724	11,898	12,791	11,183
16 Washington University	18,700	21,977	20,629	19,388	15,192	16,442	14,132	13,500
17 Stanford University	18,387	16,446	14,714	15,337	14,454	11,935	12,931	13,764
18 University of Virginia	17,847	15,442	14,826	10,389	8,296	8,153	6,406	5,768
19 U of Alabama Birmingham	17,354	19,219	14,772	10,832	8,907	7,867	7,241	6,602
20 U CA San Francisco	16,989	13,890	10,977	9,244	6,573	5,475	5,276	6,226
Total, 1st 20 institutions	577,772	521,275	468,213	449,060	410,290	378,071	365,371	335,659
21 U CA Los Angeles	15,788	14,892	13,394	13,606	14,671	8,619	8,310	7,548
22 Yale University	15,322	13,623	11,145	9,994	9,442	8,700	7,014	6,563
23 U CA San Diego	15,130	11,363	9,764	10,081	7,485	11,225	9,135	6,824
24 U CA Berkeley	15,128	13,842	12,547	12,269	12,553	11,970	10,892	8,480
25 U TX Austin	15,029	3,257	4,268	4,106	4,814	5,734	3,507	2,694
26 Cornell University	14,915	17,752	17,199	15,789	13,879	16,761	16,620	16,627
27 U of Iowa	14,862	11,359	10,205	10,478	13,545	7,828	6,827	10,301
28 U WI Madison	13,871	12,948	13,729	12,392	12,912	12,624	12,123	11,035
29 U TX SW Med Ctr Dallas	13,801	14,986	13,092	11,173	10,874	9,330	8,537	6,938
30 Baylor Col of Medicine	13,655	12,217	11,919	9,914	6,630	7,294	7,746	7,263
Total, 1st 30 institutions	725,273	647,514	585,475	558,862	517,095	478,156	456,082	419,932
31 University of Kentucky	13,374	12,011	11,790	9,924	9,253	7,476	6,720	5,819
32 SUNY Buffalo	13,186	13,390	8,143	5,584	7,831	3,086	2,118	1,759
33 University of Arizona	13,106	15,300	15,053	13,469	12,292	12,091	10,246	9,729
34 Wake Forest University	12,697	11,144	9,064	8,333	6,392	5,927	5,642	4,859
35 Johns Hopkins Univ	12,388	10,652	10,418	12,564	13,296	14,953	14,961	11,013
36 U of Illinois Urbana	12,365	11,832	13,527	16,095	20,070	24,434	20,762	15,785
37 University of Miami	12,321	11,831	11,140	10,828	8,566	6,593	5,366	4,702
38 U of Tennessee System	11,759	11,077	10,699	11,722	8,479	8,857	7,199	6,515
39 University of Rochester	11,605	12,810	10,261	7,868	9,085	6,814	6,419	4,913
40 VA Polytech Inst & St U	11,365	11,500	12,580	13,224	14,333	12,443	11,394	9,825
Total, 1st 40 institutions	849,439	769,061	698,150	668,473	626,692	580,830	546,909	494,851
41 Louisiana St U, All Camp	11,298	10,432	9,037	9,203	9,657	8,616	3,759	2,120
42 Tulane University	11,276	10,115	10,018	6,618	7,462	6,758	5,952	5,577
43 New York University	10,461	6,461	5,929	4,917	4,588	5,947	5,260	4,066
44 U CA Irvine	10,391	9,139	6,243	4,898	3,825	4,163	3,115	4,582
45 U of Alaska Fairbanks	9,965	5,470	4,441	4,751	3,275	1,547	4,100	3,039
46 University of Georgia	9,861	10,595	8,773	8,803	6,679	5,821	5,797	4,877
47 Thomas Jefferson U	9,553	8,105	7,455	6,138	5,029	9,966	8,518	8,094
48 University of Florida	9,532	10,611	10,858	11,105	11,849	13,376	12,237	10,579
49 U of Pennsylvania	9,445	11,900	12,107	11,440	10,034	7,171	11,973	9,582
50 U CA Davis	9,387	8,053	7,423	6,852	6,125	6,599	7,461	8,039
Total, 1st 50 institutions	950,608	859,942	780,434	743,198	695,215	650,794	615,081	555,406

See explanatory information and SOURCE at end of table

Table B-38. Industry-sponsored R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
51 Northwestern University	9,378	7,257	9,203	8,784	6,978	6,960	5,989	5,289
52 University of Kansas	9,356	8,149	4,320	4,037	4,877	4,228	4,473	2,809
53 University of Cincinnati	9,079	8,630	10,405	10,621	4,685	4,050	4,468	4,160
54 U TX Hlth Sci Ctr San Ant	9,021	8,922	7,300	6,746	5,268	6,876	6,166	5,535
55 Wayne State University	8,977	7,973	7,988	7,738	7,486	7,295	5,875	3,850
56 University of Colorado	8,902	7,607	13,312	12,218	10,655	8,251	7,426	6,728
57 Boston University	8,726	8,804	8,695	9,982	8,437	6,405	4,608	2,555
58 U of Missouri Columbia	8,164	10,114	10,299	7,907	7,612	9,537	9,130	6,434
59 Colorado School of Mines	8,114	6,601	5,087	5,770	5,542	4,847	4,060	3,793
60 University of Connecticut	8,026	6,640	7,651	8,357	5,831	7,421	6,388	4,996
Total, 1st 60 institutions	1,038,351	940,639	864,694	825,358	762,586	716,664	673,664	601,555
61 University of Pittsburgh	7,880	8,208	7,561	9,804	7,873	7,110	6,481	9,406
62 U Med & Dent NJ	7,741	[illegible]64	8,984	7,431	5,337	3,471	2,908	2,583
63 Mississippi State U	7,599	[illegible]5	5,913	6,012	6,920	7,163	6,389	3,886
64 Virginia Commonwealth U	7,435	[illegible]074	7,089	6,591	6,285	6,201	4,835	3,910
65 Iowa State University	7,407	8,017	8,185	7,402	8,011	6,537	5,525	4,408
66 UT Houston Hlth Sci Ctr	7,403	6,212	6,313	6,907	5,144	6,392	5,142	3,266
67 Rutgers the State U NJ	7,079	7,797	7,796	7,734	7,889	7,769	6,754	6,087
68 NM Inst Mining & Tech	6,895	5,165	6,057	9,803	9,616	9,907	10,194	7,695
69 Lehigh University	6,832	6,767	7,303	8,088	7,467	8,133	8,030	7,596
70 Michigan State University	6,818	7,853	6,271	6,442	6,304	4,693	4,557	4,068
Total, 1st 70 institutions	1,111,440	1,011,061	936,166	901,572	833,432	784,040	734,479	654,460
71 University of IL Chicago	6,746	6,174	5,061	4,570	3,539	4,844	5,157	5,333
72 Georgetown University	6,737	6,148	6,773	5,914	4,947	4,549	3,362	4,370
73 University of Oklahoma	6,650	5,630	4,887	3,918	4,319	3,530	2,562	1,991
74 University of Idaho	6,478	5,977	7,495	5,608	4,064	4,447	3,731	3,788
75 Emory University	6,383	11,473	8,966	8,145	7,465	6,920	7,170	6,169
76 Colorado State University	6,320	5,736	11,793	5,369	5,074	3,380	2,883	2,432
77 University of Louisville	6,312	4,616	4,180	3,651	3,547	3,093	1,403	1,697
78 Rensselaer Polytech Inst	6,210	6,135	5,925	10,813	12,161	12,236	11,418	9,066
79 University of Dayton	6,160	5,834	5,313	4,813	4,307	4,359	4,790	4,164
80 U TX Med Br Galveston	6,008	5,991	6,115	4,831	3,978	2,652	2,260	1,847
Total, 1st 80 institutions	1,175,444	1,074,775	1,002,674	959,204	886,833	834,050	779,215	695,317
81 Clemson University	5,887	5,469	5,410	6,035	7,174	6,163	7,595	3,849
82 Rush University	5,872	4,970	4,993	5,036	3,218	4,092	3,622	3,714
83 SUNY Stony Brook	5,848	5,850	5,012	4,670	2,890	2,783	2,426	3,093
84 Case Western Reserve U	5,784	5,427	5,708	6,480	6,851	4,667	4,954	2,915
85 U MA Lowell	5,779	3,599	3,695	3,691	3,770	3,599	3,892	2,849
86 U MA Amherst	5,738	4,760	4,868	5,288	5,466	--	--	--
87 George Washington U	5,704	4,314	2,676	2,168	1,181	1,248	988	1,100
88 Texas Tech University	5,634	5,441	5,474	5,284	4,815	4,428	4,391	4,393
89 Montana St U Bozeman	5,489	5,143	3,139	2,910	2,983	4,043	3,833	2,902
90 SUNY Hlth Sci Ctr Brklyn	5,418	5,232	4,306	4,421	3,256	732	1,084	1,425
Total, 1st 90 institutions	1,232,597	1,124,980	1,047,955	1,005,187	928,437	865,805	812,000	721,557
91 Indiana University	5,357	5,815	5,689	4,850	3,569	2,367	2,316	2,591
92 University of Vermont	5,231	5,467	4,878	4,573	4,337	4,181	3,473	3,486
93 Desert Research Institute	5,200	3,357	3,798	3,293	4,466	3,670	3,329	3,079
94 Temple University	5,173	5,458	6,011	6,011	4,155	3,452	2,707	2,544
95 Allegheny U of Hlth Sci	5,060	4,675	5,556	4,638	3,290	2,741	1,495	326
96 Eastern VA Med School	5,039	5,975	4,064	544	0	0	0	0
97 Tufts University	4,970	4,687e	5,131	4,647e	3,451e	7,740e	7,761e	8,010e
98 U of Alabama Huntsville	4,752	3,390	2,948	2,857	1,963	1,847	2,529	2,170
99 Utah State University	4,614	3,322	2,265	3,268	5,167	2,155	2,089	1,315
100 Oregon Health Sciences U	4,597	4,685	945	992	1,043	1,099	1,325	706
Total, 1st 100 institutions	1,282,590	1,171,811	1,089,240	1,040,860	959,878	895,057	839,024	745,784

See explanatory information and SOURCE at end of table.

Table B-38. Industry-sponsored R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
101 Creighton University	4,517	3,885	3,467	3,116	2,654	3,357e	3,886e	5,229
102 Princeton University	4,483	6,335	8,089	5,829	4,322	4,595	4,964	5,640
103 U Arkansas Main	4,474	4,809	5,605	4,964	4,051	3,323	2,947	2,444
104 California Inst of Tech	4,447	5,105	4,947	3,835	3,280	2,764	2,268	3,567
105 Drexel University	4,343	5,845	5,764	4,233	3,429	2,873	3,888	4,202
106 U of NE Med Ctr Omaha	4,286	3,903	3,639	3,488	2,163	1,682	1,595	1,194
107 Loyola U of Chicago	4,271	4,033i	3,795	3,614	3,442	1,545	1,398	1,305
108 U of Maine	4,214	4,158	4,406	4,117	3,545	4,719	4,663	4,002
109 Auburn University	4,212	3,243	3,055	6,059	6,807	6,450	5,541	4,111
110 Illinois Inst of Tech	4,000	1,634	1,254	1,031	1,145	1,660	1,819	2,089
Total, 1st 110 institutions	1,325,837	1,214,761	1,133,261	1,081,146	994,716	928,025	871,993	779,567
111 University of Utah	3,825	4,319	4,087	4,357	4,124	2,908	3,443	2,700
112 Michigan Tech University	3,749	2,840	2,885	3,127	2,946	4,150	3,999	3,584
113 U Arkansas Medical Sci	3,733	2,884	2,158	1,803	1,330	1,191	1,117	1,679
114 U of South Carolina	3,657	7,869	8,046	6,414	9,019	7,625	3,072	1,968
115 West Virginia University	3,608	3,160	4,058	3,973	5,585	11,163	10,082	3,953
116 University of Notre Dame	3,511	2,665	3,710	4,024	4,658	4,952	3,965	4,204
117 Idaho State University	3,479	1,431	2,546	1,678	1,083	603	475	411
118 U of Nebraska Lincoln	3,465	3,145	3,558	2,287	3,712	2,806	3,394	2,675
119 University of Akron	3,313	3,542	3,822	4,922	4,697	3,813	3,873	2,591
120 CUNY Mt Sinai Sch Med	3,288	5,571	5,934	5,549	4,642	3,978	4,053	3,732
Total, 1st 120 institutions	1,361,465	1,252,187	1,174,065	1,119,280	1,036,512	971,214	909,466	807,064
121 U of South Florida	3,282	4,782	6,338	5,041	5,127	6,091	4,250	327
122 Loma Linda University	3,273	2,499	2,514	2,228	2,750	2,508	3,266	1,964
123 U TX Arlington	3,245	3,205	3,275	3,363	2,351	2,884	2,286	2,407
124 Washington State U	3,149	2,537	3,151	2,726	2,459	2,074	2,523	2,258
125 Vanderbilt University	3,097	3,124	3,033	2,523	3,794	1,941	2,313	2,759
126 Medical Col of Wisconsin	3,019	2,222	4,164	5,053	4,684	4,175	3,189	3,684
127 Medical Col of Georgia	2,995	3,484	3,575	2,777	2,090	1,731	1,920	1,810
128 U CA Santa Barbara	2,988	2,576	2,711	2,487	2,447	2,379	2,655	2,645
129 Univ of North Dakota	2,971	1,814	728	982	863	853	1,556	1,264
130 University of Delaware	2,964	3,681	4,117	4,857	5,075	4,732	4,397	4,073
Total, 1st 130 institutions	1,392,448	1,282,111	1,207,671	1,151,317	1,068,152	1,000,582	937,821	830,255
131 Polytechnic University	2,857	1,566	2,589	1,420e	1,972	1,972	2,278	2,821
132 University of Tulsa	2,820	2,921	2,652	2,761	2,649	2,548	2,330	2,020
133 The Rockefeller Univ	2,800	2,660	4,031	4,907	4,623	4,816	4,918	3,453
134 Arizona State University	2,758	7,169	5,780	4,772	5,790	6,860	7,354	2,382
135 Oregon Grad Inst Sci Tech	2,757	3,042	2,973	2,638	2,244	1,673	1,591	1,573
136 Institute of Textile Tech	2,742	2,586	2,239	2,284	2,143	2,045	1,869	1,311
137 U of NC Chapel Hill	2,592	2,403	2,379	2,539	3,298	3,677	2,179	579
138 Dartmouth College	2,571	2,196	2,833	3,375	2,638	2,719	2,251	1,768
139 Columbia University	2,559	1,478	1,632	5,919	6,454	6,619	5,618	5,408
140 New Mexico State Univ	2,556	2,444	3,516	3,466	3,958	4,939	7,293	6,242
Total, 1st 140 institutions	1,419,460	1,310,576	1,238,295	1,185,398	1,103,921	1,038,450	975,502	857,812
141 Syracuse University	2,550	2,321	4,522	2,166	5,195	4,405	3,851	3,937
142 Saint Louis University	2,483	2,087	1,545	1,054	523	1,058	1,148	913
143 University of New Mexico	2,389	3,087	4,038	5,474	8,886	4,684	4,022	2,496
144 Florida Inst of Tech	2,354	1,999i	947	1,884	1,575	1,942	1,205	567
145 Oklahoma State University	2,334	2,902	3,381	3,531	3,132	2,473	1,963	1,645
146 Ohio University	2,322	2,526	2,690	2,201	1,779	839	454	393
147 NJ Inst of Technology	2,313	1,879	3,288	3,459	2,173	2,018	1,710	1,125
148 U PR Mayaguez	2,275	1,852	1,241	382	1,008	650i	293	222
149 Kansas State University	2,243	2,701	3,111	2,889	2,586	2,389	2,483	1,790
150 Old Dominion University	2,233	1,771	1,061	1,151	1,011	979	581	353
Total, 1st 150 institutions	1,442,956	1,333,701	1,264,119	1,209,589	1,131,789	1,059,887	993,212	871,253

See explanatory information and SOURCE at end of table.

Table B-38. Industry-sponsored R&D expenditures at universities and colleges: fiscal years 1989-96

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1992	1991	1990	1989
151 Northern Illinois U	2,222	2,127	988	1,317	1,458	1,629	2,351	1,656
152 Harvard University	2,137	8,395i	10,228	9,319e	11,647e	11,957	10,565e	10,461e
153 Stevens Inst of Tech	2,087	1,685	1,884	1,659	6,237	1,635	960	600
154 University of Wyoming	2,086	1,930	1,185	2,268	2,841	2,000	2,001	1,535
155 Northeastern University	2,072	2,334	2,002	1,445	1,444	1,976i	1,711	953
156 U of Missouri Rolla	2,036	1,316	1,122	1,717	2,147	1,564	2,186	2,385
157 Sthrn IL U Carbondale	2,033	2,325	2,347	2,033	2,004	2,190	1,884	1,504
158 U of South Alabama	1,981	1,392	2,063	1,562	1,703	1,788	1,553	1,277
159 U Mississippi, All Camp	1,920	1,621	1,998	2,727	1,742	1,366	1,250	1,085
160 SUNY Albany	1,904	1,709	1,756	1,240	1,080	876	727	657
Total, 1st 160 institutions	1,463,434	1,358,535	1,289,692	1,234,876	1,164,092	1,086,868	1,018,400	893,366
161 Rice University	1,898	2,726	3,837	4,550	4,147	3,600	3,616	3,232
162 Brigham Young University	1,865i	1,815	1,712	1,678	2,241	1,817	1,845	1,488
163 U MD Baltimore County	1,803	1,231	537	1,349	1,363	1,043e	596e	418e
164 SUNY Binghamton	1,799	2,074	1,502	1,312	1,505	1,761	1,308	1,126
165 Clarkson University	1,779	1,698	1,658	1,455	2,315	2,051	1,638	1,282
166 Florida Atlantic U	1,776	1,777	1,909	2,504	1,943	1,736	639	626
167 Alfred University	1,755	1,967	2,012	1,897	1,988	1,720	1,672	1,475
168 Brown University	1,716	1,057	1,467	1,825	1,882	2,497	3,307	4,291
169 U CA Riverside	1,702	1,109	1,103	1,208	857	1,361	903	1,094
170 University of North Texas	1,657	931	611	748	1,712	1,357	915	1,004
Total, 1st 170 institutions	1,481,184	1,374,920	1,306,040	1,253,402	1,184,045	1,105,811	1,034,839	909,402
171 Mercer University	1,651	823	849	399	644	1,424	355	193
172 University of Toledo	1,613i	1,467	1,694	1,956	1,798	1,661	1,885	1,152
173 U of Detroit Mercy	1,590	1,714	1,148	1,252	1,363	1,091	1,244	1,125
174 Florida State University	1,565	2,166	1,893	1,377	598	1,408	669	832
175 North Dakota State U	1,534	1,532	1,261	1,191	1,193	1,455	1,289	1,257
176 New York Medical College	1,532	1,792	1,807	1,480	1,429	1,981	1,706	878
177 The University of Montana	1,511	682	826	324	247	363	433	340
178 SUNY Col Env Sci Frstry	1,500	1,772i	2,044	2,010	1,793	1,707	1,867	1,716
179 U of Nevada Las Vegas	1,443	1,828	1,582	919	610	377	177i	198i
180 East Carolina University	1,441	1,624	1,952	2,109	1,470	1,498	1,692	1,584
Total, 1st 180 institutions	1,496,564	1,390,320	1,321,096	1,266,419	1,195,190	1,118,976	1,046,156	918,677
181 The University of Alabama	1,407	1,920	2,332	2,419	2,240	2,396	1,798	2,082
182 U of Nevada Reno	1,399	1,756	1,674	1,033	916	1,276	1,227	1,019
183 Tennessee Tech U	1,367	1,488	1,235	1,288	1,097	871	945	836
184 University of Houston	1,341	1,600	1,183	1,339	1,595	1,608	1,529	1,375
185 U of New Hampshire	1,315	1,723	1,476	1,467	1,813	1,278	1,464	1,183
186 University of Chicago	1,306	1,679	1,324	1,958	1,399	1,425	1,202	1,520
187 Cleveland State U	1,291i	1,246	701	593	605	753	206	421
188 Inst Paper Sci and Tech	1,276i	1,235	1,971	1,726	624	435	172	591
189 Western Michigan U	1,276	1,077	1,168	994	947	843	1,102	852i
190 Wright State University	1,250	1,641	1,429	539	391	562	503	315
Total, 1st 190 institutions	1,509,792	1,405,685	1,335,589	1,279,775	1,206,817	1,130,423	1,056,304	928,871
191 Rochester Inst of Tech	1,246	1,122	1,420	1,504	1,574i	1,271i	969i	666i
192 Kent State University	1,243	654	130	155	94	125	195	266
193 Northern Arizona U	1,235	769	913	648	1,048	568	466	389
194 Morris Brown College	1,230	0	12	0	124e	267	0	0
195 U of Central Florida	1,207	2,272	2,272	5,810	3,947	4,287	3,813	2,580
196 CUNY Queens College	1,194	1,006	762	552	318	231	304	33
197 Marquette University	1,158	1,187	1,041	801	463	1,417	1,239	921
198 U MA Worcester	1,146	2,492	3,776	3,721	3,485	--	--	--
199 CA St U Chico	1,141	1,485	613e	613e	453i	373i	291i	211i
200 Med U of South Carolina	1,134	6,026	5,534	1,793	2,868	2,115	2,264	2,089
Total, 1st 200 institutions	1,521,726	1,422,698	1,352,062	1,295,372	1,221,191	1,141,077	1,065,845	936,026
Total, all other sampled insts	38,950	44,339	48,987	65,652	58,490	63,800	61,891	58,855
Estimated total non-sampled insts	14,997	15,826	12,667	0	0	0	0	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-39. R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engi-neering	Physical sciences	Environ-mental sciences	Math & computer sciences	Life sciences	Psy-chology	Social sciences	Other sciences
Total, all institutions	22,995,463	3,674,806	2,260,281	1,477,873	991,176	12,696,650	372,305	1,103,711	418,660
1 Johns Hopkins Univ	798,468	213,465	118,464	30,178	116,751	290,860	1,031	11,961	15,758
2 University of Michigan	468,876	108,668	19,179	22,940	13,117	230,469	9,718	58,942	5,843
3 U WI Madison	412,570	53,094	38,439	23,908	9,740	241,824	14,989	29,744	832
4 U of Washington	406,472	31,787	20,099	58,398	8,341	266,595	8,305	12,947	0
5 MA Institute of Tech	380,612	164,816	97,350	14,361	19,594	36,104	7,213	14,408	26,766
6 U CA San Diego	371,509	31,373	39,637	109,260	1,586	179,999	4,216	5,066	372
7 Texas A&M University	366,983	97,848	22,552	71,841	7,378	143,595	1,592	18,540	3,637
8 U CA Los Angeles	354,645	28,509	24,079	15,086	10,934	241,194	7,676	24,962	2,205
9 University of Minnesota	341,179	34,080	15,922	10,447	16,266	244,893	7,198	12,373	0
10 Cornell University	339,534	44,724	50,239	3,858	31,360	193,361	4,757	11,235	0
Total, 1st 10 institutions	4,240,848	808,364	445,960	360,277	235,067	2,068,894	66,695	200,178	55,413
11 Pennsylvania State U	337,938	138,718	25,164	23,222	7,703	94,400	6,612	30,178	11,941
12 Stanford University	324,821	89,231	51,047	9,906	23,869	142,816	2,392	5,560	0
13 U CA San Francisco	320,757	0	0	0	0	320,757	0	0	0
14 U CA Berkeley	316,320	69,000	67,181	5,232	5,144	125,648	6,331	32,559	5,225
15 U of Pennsylvania	288,430	12,564	24,478	622	8,246	216,836	2,152	23,532	0
16 Harvard University	282,443	4,412	25,245	11,595	2,667	178,308	3,173	45,553	11,490
17 University of Arizona	279,656	20,896	84,643	9,156	7,406	142,920	1,939	11,661	1,035
18 U of Illinois Urbana	267,008	61,712	42,032	27,238	7,776	63,634	5,566	16,108	42,942
19 Ohio State University	262,147	61,403	20,229	9,878	12,685	133,876	2,982	17,826	3,268
20 U CA Davis	254,604	17,349	10,505	5,633	2,212	214,906	1,642	2,152	205
Total, 1st 20 institutions	7,174,972	1,283,649	796,484	462,759	312,775	3,702,995	99,484	385,307	131,519
21 University of Colorado	251,301	30,788	40,795	40,719	8,986	116,864	7,119	5,993	37
22 U of Southern California	244,258	36,933	9,288	13,067	38,026	135,848	2,446	6,640	2,010
23 Duke University	242,235	10,666	13,366	2,970	2,928	197,213	4,243	10,849	0
24 U TX Austin	241,606	101,222	50,515	26,030	13,100	22,176	4,347	17,198	7,018
25 Columbia University	236,403	12,866	20,537	37,387	5,440	151,274	2,387	6,512	0
26 Yale University	234,901	6,585	15,853	2,251	3,950	199,028	4,894	2,340	0
27 Georgia Institute of Tech	225,633	149,412	17,984	12,696	30,706	4,790	2,440	6,029	1,576
28 Washington University	218,640	4,914	8,368	3,167	7,086	192,578	849	1,678	0
29 U MD College Park	216,957	65,537	56,690	10,426	21,160	31,285	1,979	29,880	0
30 University of Florida	213,099	30,446	13,470	3,163	5,406	152,647	2,176	4,291	1,500
Total, 1st 30 institutions	9,500,005	1,733,018	1,043,350	614,635	449,563	4,906,698	132,364	476,717	143,660
31 University of Georgia	209,357	4,946	9,601	9,885	6,188	146,618	5,697	26,422	0
32 U of NC Chapel Hill	208,529	0	9,760	9,516	8,628	146,892	4,048	29,685	0
33 Purdue University	206,951	62,490	19,092	4,175	8,569	91,770	2,426	17,959	470
34 Louisiana St U, All Camp	196,328	34,767	11,141	23,221	2,725	115,734	356	7,225	1,159
35 NC State U Raleigh	190,748	61,709	12,234	11,818	7,557	88,772	964	4,931	2,763
36 University of Pittsburgh	189,826	8,273	10,660	155	2,402	157,903	3,023	4,699	2,711
37 Northwestern University	187,262	28,402	11,844	508	4,730	103,209	1,458	4,821	32,290
38 Rutgers the State U NJ	185,103	24,686	18,396	13,296	16,254	84,431	6,943	17,162	3,935
39 Baylor Col of Medicine	184,613	0	0	0	0	184,613	0	0	0
40 Michigan State University	182,589	16,403	27,871	572	7,545	116,166	2,250	11,508	274
Total, 1st 40 institutions	11,441,311	1,974,694	1,173,949	687,781	514,161	6,142,806	159,529	601,129	187,262
41 U of Iowa	178,228	19,965	14,860	1,644	1,735	131,084	1,923	6,218	799
42 U of Alabama Birmingham	170,193	8,015	1,372	10	259	159,287	970	280	0
43 California Inst of Tech	157,005	29,238	75,331	15,444	10,480	24,137	0	989	1,386
44 Indiana University	154,948	3,874	26,645	1,853	4,280	94,500	6,846	12,674	4,276
45 Iowa State University	151,914	42,150	9,407	1,359	11,067	71,154	709	11,355	4,713
46 U of Tennessee System	149,331	27,444	11,203	13,086	11,817	79,094	226	4,769	1,692
47 Emory University	149,168	0	6,289	0	1,003	136,343	1,529	4,004	0
48 University of Connecticut	147,522	34,200	3,896	8,516	2,541	78,643	5,655	12,157	1,914
49 New York University	145,874	0	7,000	470	10,943	116,437	4,773	5,319	932
50 University of Rochester	144,914	31,104	12,803	328	3,342	90,143	6,101	782	311
Total, 1st 50 institutions	12,990,408	2,170,684	1,342,755	730,491	571,628	7,123,628	188,261	659,676	203,285

See explanatory information and SOURCE at end of table.

Table B-39. R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 VA Polytech Inst & St U	143,815	39,562	9,342	31,786	4,333	52,424	2,191	4,177	0
52 Case Western Reserve U	143,435	25,625	5,451	437	533	106,472	561	4,356	0
53 SUNY Buffalo	137,701	23,367	8,038	872	6,421	87,207	6,998	4,593	205
54 University of Chicago	137,679	0	27,859	4,790	2,838	98,226	1,685	2,281	0
55 Carnegie Mellon U	136,514	32,827	8,065	2,164	64,794	13,949	5,291	6,163	3,261
56 University of Virginia	134,853	21,097	12,161	4,581	4,595	84,561	2,706	4,691	461
57 Oregon State University	131,334	17,305	5,649	24,779	2,608	76,770	93	3,818	312
58 U TX SW Med Ctr Dallas	130,162	0	0	0	0	130,162	0	0	0
59 University of Miami	130,056	2,121	1,823	28,375	676	89,080	2,599	5,326	56
60 Colorado State University	126,701	17,406	8,126	12,853	2,856	66,166	2,394	9,207	7,693
Total, 1st 60 institutions	14,342,658	2,349,994	1,429,269	841,128	661,282	7,928,645	212,779	704,288	215,273
61 SUNY Stony Brook	126,377	7,600	22,815	17,501	6,442	66,034	2,614	3,369	2
62 U of Missouri Columbia	123,133	13,324	6,058	722	1,143	88,140	2,840	10,711	195
63 U of MD Baltimore	122,207	0	0	0	0	122,207	0	0	0
64 University of IL Chicago	121,540	10,546	6,453	974	2,981	88,861	3,487	7,528	710
65 U TX MD Anderson Cncr	120,964	0	2,538	0	2,559	115,867	0	0	0
66 U CA Irvine	119,647	13,048	20,496	2,148	3,496	73,801	1,953	4,236	469
67 University of Kentucky	118,721	19,565	3,173	248	1,530	85,515	625	2,114	5,951
68 Vanderbilt University	117,003	8,903	7,908	261	827	93,514	2,453	3,137	0
69 University of New Mexico	116,618	36,001	6,257	2,193	4,268	33,096	3,283	7,684	23,836
70 University of Utah	114,423	18,482	9,512	3,820	10,677	70,658	953	321	0
Total, 1st 70 institutions	15,543,291	2,477,463	1,514,479	868,995	695,205	8,766,338	230,987	743,388	246,436
71 Georgetown University	112,582	0	4,675	808	905	103,154	160	2,791	89
72 Princeton University	112,380	36,447	24,918	8,871	6,706	18,840	5,743	10,855	0
73 Wayne State University	112,151	9,439	8,649	0	987	84,603	1,886	4,923	1,664
74 Boston University	110,267	8,639	13,156	1,205	2,958	75,059	250	1,408	7,592
75 University of Oklahoma	109,071	15,564	9,675	16,832	2,256	47,858	4,580	12,306	0
76 The Rockefeller Univ	105,595	0	6,478	0	487	98,630	0	0	0
77 U of Nebraska Lincoln	102,460	15,424	5,782	8,775	1,330	65,873	1,418	3,513	345
78 University of Kansas	100,649	8,108	8,645	9,360	656	60,097	1,220	2,519	10,044
79 Washington State U	98,641	10,576	4,855	523	400	59,458	308	12,691	9,830
80 U Med & Dent NJ	98,535	0	0	0	0	98,535	0	0	0
Total, 1st 80 institutions	16,605,622	2,581,660	1,601,312	915,369	711,890	9,478,445	246,552	794,394	276,000
81 U of South Florida	94,157	16,501	1,811	11,631	1,033	56,446	4,674	2,061	0
82 CUNY Mt Sinai Sch Med	92,405	0	0	0	0	92,405	0	0	0
83 Yeshiva University	91,430	0	0	0	0	91,430	0	0	0
84 U CA Santa Barbara	91,284	37,759	20,133	12,405	6,719	3,051	3,564	6,933	720
85 University of Cincinnati	89,286	17,898	3,832	170	396	64,766	270	715	1,239
86 Auburn University	87,358	18,579	2,872	422	606	46,720	842	2,041	15,276
87 Clemson University	84,836	26,066	5,212	1,220	3,692	40,820	12	6,886	928
88 Arizona State University	84,653	28,147	18,962	7,166	3,067	10,196	4,566	8,347	4,202
89 Mississippi State U	84,124	18,056	2,109	2,900	667	53,126	8	4,448	2,810
90 Tulane University	83,660	6,952	3,132	184	661	68,169	517	284	3,761
Total, 1st 90 institutions	17,488,815	2,751,618	1,659,375	951,467	728,731	10,005,574	261,005	826,109	304,936
91 U TX Hlth Sci Ctr San Ant	83,028	0	0	0	0	83,028	0	0	0
92 Oklahoma State University	82,960	19,411	6,193	1,186	1,493	47,049	552	4,700	2,376
93 UT-Houston Hlth Sci Ctr	82,803	0	0	0	0	82,800	0	3	0
94 Utah State University	81,709	24,219	5,470	12,990	1,142	26,561	1,166	3,214	6,947
95 Oregon Health Sciences U	80,333	0i	0i	0i	0i	76,710i	3,623i	0i	0i
96 Tufts University	79,356	4,105	6,343	9	847	62,376	1,918	3,758	0
97 Virginia Commonwealth U	79,018	338	3,609	0	571	72,016	1,141	1,343	0
98 U of South Carolina	78,619	18,469	9,968	8,704	7,842	19,819	1,419	7,755	4,643
99 Florida State University	78,125	1,635	41,672	14,683	3,787	9,992	2,659	3,697	0
100 New Mexico State Univ	76,493	42,742	3,163	6,046	2,840	20,257	159	1,083	203
Total, 1st 100 institutions	18,291,259	2,862,537	1,735,793	995,085	747,253	10,506,182	273,642	851,662	319,105

See explanatory information and SOURCE at end of table.

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Table B-39. R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
101 Wake Forest University	75,331	0	1,484	0	224	73,003	0	620	0
102 U TX Med Br Galveston	73,759	0	0	0	0	73,759	0	0	0
103 U MA Amherst	73,678	10,685	20,647	6,042	11,896	20,387	2,529	1,084	408
104 Univ of Hawaii Manoa	73,302	2,752	22,069	8,135	1,564	32,113	165	2,890	3,614
105 Woods Hole Oceanograph	73,015	14,313	0	58,702	0	0	0	0	0
106 U CA Riverside	71,495	6,087	5,475	4,259	926	52,873	1,174	701	0
107 U of Alaska Fairbanks	71,381	3,704	13,752	32,044	94	18,357	0	3,430	0
108 Kansas State University	71,222	11,376	5,734	238	1,001	48,419	825	2,195	1,434
109 Thomas Jefferson U	69,154	0	0	0	0	69,154	0	0	0
110 Brown University	67,621	10,249	8,791	5,341	10,529	26,204	2,140	4,367	0
Total, 1st 110 institutions	19,011,217	2,921,703	1,813,745	1,109,846	773,487	10,920,451	280,475	866,949	324,561
111 SUNY Albany	66,247	0	4,139	6,741	784	44,725	3,309	6,549	0
112 U MA Worcester	63,341	0	0	0	0	63,341	0	0	0
113 U Arkansas Main	59,753	9,096	4,327	2,729	818	38,720	537	3,151	375
114 Temple University	56,533	293	1,101	3	250	40,334	4,167	9,697	688
115 University of Idaho	56,198	8,477	2,042	2,814	137	41,210	207	1,311	0
116 West Virginia University	54,844	13,042	1,472	6,879	4,292	25,308	29	1,660	2,162
117 Med U of South Carolina	54,426	0	0	0	0	54,426	0	0	0
118 University of Delaware	54,154	17,369	8,501	8,205	4,507	11,544	1,106	2,922	0
119 University of Vermont	53,659	2,091	981	285	285	46,766	395	91	2,765
120 Dartmouth College	52,945	5,172	3,288	926	960	40,927	607	254	811
Total, 1st 120 institutions	19,583,317	2,977,243	1,839,596	1,138,428	785,520	11,327,752	290,832	892,584	331,362
121 U CA Santa Cruz	51,062	2,455	23,722	11,504	1,707	9,587	685	1,372	30
122 Montana St U Bozeman	50,097	7,836	7,223	607	771	30,569	0	1,909	1,182
123 George Washington U	49,263	8,658	1,905	37	7,205	24,344	456	6,346	312
124 University of Houston	49,178	25,212	8,666	1,146	3,646	6,585	2,865	1,027	31
125 Allegheny U of Hlth Sci	48,790	0	0	0	0	48,790	0	0	0
126 Rush University	48,772	0	0	0	0	45,056	3,716	0	0
127 U of Nevada Reno	47,977	4,918	2,076	7,522	135	18,264	703	2,032	12,327
128 Medical Col of Wisconsin	47,365	0	0	0	0	47,365	0	0	0
129 U of New Hampshire	45,693	3,226	1,656	24,692	950	8,189	280	3,390	3,310
130 U PR Mayaguez	44,502	4,474	1,133	4,707	377	33,724	0	87	0
Total, 1st 130 institutions	20,066,016	3,034,022	1,885,977	1,188,643	800,311	11,600,225	299,537	908,747	348,554
131 North Dakota State U	43,661	5,438	3,284	185	606	30,408	629	2,951	160
132 San Diego St University	43,201	2,971	2,359	1,694	756	22,479	3,327	2,467	7,148
133 University of Dayton	43,188	37,150	4,094	448	156	785	81	3	471
134 Texas Tech University	43,000	10,294	4,571	896	1,694	22,260	65	3,056	164
135 U of NE Med Ctr Omaha	42,612	0	0	0	0	42,612	0	0	0
136 Loyola U of Chicago	42,565	0	528	0	771	37,637	1,019	2,092	518
137 University of Wyoming	40,553	3,690	3,470	8,640	1,021	17,625	252	476	5,379
138 Rice University	39,696	5,130	8,696	8,016	12,543	4,918	214	179	0
139 U of Rhode Island	39,575	4,128	981	22,249	237	5,458	3,471	2,449	602
140 NJ Inst of Technology	39,110	17,937	2,509	9,540	3,556	0	0	289	5,279
Total, 1st 140 institutions	20,483,177	3,120,760	1,916,469	1,240,311	821,651	11,784,407	308,595	922,709	368,275
141 U of Alabama Huntsville	38,176	14,156	8,906	6,246	5,147	359	1	89	3,272
142 Rensselaer Polytech Inst	37,917	26,694	5,365	1,345	2,701	789	253	137	633
143 Unif Svcs U of Hlth Sci	36,851	0	0	0	0	36,851	0	0	0
144 Brandeis University	36,760	0	3,785	0	1,322	17,513	1,212	12,928	0
145 Medical Col of Georgia	35,971	0	0	0	0	35,971	0	0	0
146 Lehigh University	34,780	27,915	4,101	1,168	450	913	117	116	0
147 U of Maine	34,684	3,800	1,470	6,122	137	21,837	250	1,067	1
148 Clark Atlanta University	34,566	5,714	6,000	9,020	4,365	8,585	0	882	0
149 Syracuse University	34,322	9,328	5,231	959	10,201	3,873	960	2,368	1,402
150 University of Oregon	33,654	1,540	7,305	1,924	3,449	15,249	1,920	2,267	0
Total, 1st 150 institutions	20,840,858	3,209,907	1,958,632	1,267,095	849,423	11,926,347	313,308	942,563	373,583

See explanatory information and SOURCE at end of table

Table B-39. R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engi-neering	Physical sciences	Environ-mental sciences	Math & computer sciences	Life sciences	Psy-chology	Social sciences	Other sciences
151 U Arkansas Medical Sci	33,354	0	0	0	0	33,354	0	0	0
152 SUNY Hlth Sci Ctr Brklyn	31,920i	0i	0i	0i	0i	31,920i	0i	0i	0i
153 US Naval Postgrad School	30,706	7,651i	2,547i	5,068i	7,620i	0i	0i	5,730i	2,090i
154 University of Louisville	29,655	2,107	1,739	22	527	23,571	64	1,625	0
155 Howard University	28,894	3,930	5,276	2	6,028	9,195	1,389	2,229	845
156 Sthrn IL U Carbondale	28,578	4,188	1,763	290	924	15,455	569	1,401	3,988
157 Univ of North Dakota	28,188	20,741	69	530	0	4,643	11	820	1,374
158 U Mississippi, All Camp	26,215	3,650	4,595	0	47	17,174	132	617	0
159 Col of William & Mary	25,183	0	5,105	16,700	808	827	183	1,560	0
160 Saint Louis University	25,099	13	2	1,023	27	23,950	43	7	34
Total, 1st 160 institutions	21,128,650	3,252,187	1,979,728	1,290,730	865,404	12,086,436	315,699	956,552	381,914
161 University of Notre Dame	24,556	7,327	11,532	0	1,227	3,986	399	85	0
162 U TX Arlington	24,010	9,696	2,126	523	8,736	710	41	1,514	664
163 Michigan Tech University	23,882	14,801	1,883	2,183	484	3,938	0	579	14
164 George Mason University	23,230	7,391	2,416	254	2,963	2,043	1,624	6,539	0
165 U MD Biotechnology Inst	22,933	0	0	6,157	0	16,776	0	0	0
166 Florida A&M University	22,474	4,697	2,955	2,608	1,270	10,776	0	168	0
167 CUNY City College	22,166	8,889	8,220	299	831	3,510	348	69	0
168 SUNY Col Env Sci Frstry	21,969	7,182i	1,306i	2,265i	0i	11,079i	0i	137i	0i
169 The University of Alabama	21,806	10,084	3,388	1,936	1,667	1,629	117	2,674	311
170 U of Central Florida	21,488	14,742	5,091	0	401	375	831	48	0
Total, 1st 170 institutions	21,357,164	3,336,996	2,018,645	1,306,955	882,983	12,141,258	319,059	968,365	382,903
171 U MD Center for EES	21,448	0	0	21,448	0	0	0	0	0
172 The University of Montana	21,421	0	548	358	3,038	13,891	28	1,154	2,404
173 Oregon Grad Inst Sci Tech	21,412	2,948	6,528	3,388	8,548	0	0	0	0
174 U of Missouri Rolla	20,652	14,248	3,302	1,037	1,138	837	8	82	0
175 NM Inst Mining & Tech	20,580	13,890	2,313	3,709	306	354	6	0	0
176 Desert Research Institute	20,100	0	0	13,500	0	3,300	0	3,300	0
177 U WI Milwaukee	19,679	3,591	3,057	3,301	536	2,207	341	5,746	900
178 Drexel University	19,322	12,650	1,322	1,029	1,375	621	0	2,325	0
179 Colorado School of Mines	19,291	14,406	2,225	548	2,022	0	0	90	0
180 SUNY Binghamton	18,500	5,278	3,044	626	1,294	2,083	3,594	2,581	0
Total, 1st 180 institutions	21,559,569	3,404,007	2,040,984	1,355,899	901,242	12,164,551	323,036	983,643	386,207
181 The University of Memphis	18,429	3,106	299	3,379	704	2,233	4,353	2,858	1,497
182 Ohio University	18,329	10,174	2,408	96	120	4,827	426	242	36
183 Georgia State University	18,114	0	4,431	413	554	3,750	3,812	4,619	535
184 Northeastern University	17,980	7,617	3,717	0	1,684	3,313	847	802	0
185 U MA Lowell	17,834	8,452	5,426	24	740	2,033	172	578	409
186 Eastern VA Med School	17,730	0	0	0	0	17,730	0	0	0
187 Old Dominion University	17,577	6,267	2,540	5,559	1,301	1,584	48	278	0
188 Wright State University	17,381	2,864	2,256	258	426	10,450	646	27	454
189 U of Nevada Las Vegas	16,893	1,847i	3,047i	5,611i	2,700i	1,982i	49i	1,427i	230i
190 Florida International U	16,856	8,396	1,475	427	1,066	2,145	749	2,598	0
Total, 1st 190 institutions	21,736,692	3,452,730	2,066,583	1,371,666	910,537	12,214,598	334,138	997,072	389,368
191 C R Drew U of Med & Sci	16,386	0	0	0	0	16,386	0	0	0
192 New York Medical College	16,372	0	0	0	0	16,372	0	0	0
193 Illinois Inst of Tech	16,000	4,725	6,378	0	1,816	3,037	24	20	0
194 NC A&T State University	15,391	9,765	479	0	308	4,575	35	802	27
195 University of Akron	15,507	5,503	7,571	71	659	736	40	927	0
196 Stevens Inst of Tech	15,249	12,449	842	0	74	0	0	1,884	0
197 CUNY Hunter College	15,021	0	3,626	1,666	360	4,410	1,723	2,218	1,018
198 U PR Med Sci Campus	15,005	0	0	0	0	15,005	0	0	0
199 South Dakota State U	14,925	1,111	589	580	24	12,009	0	612	0
200 U of South Alabama	14,873	587	302	325	716	12,028	202	713	0
Total, 1st 200 institutions	21,892,021	3,486,870	2,086,370	1,374,308	914,494	12,299,156	336,162	1,004,248	390,413
Total, all other sampled insts	856,372	165,934	136,865	58,220	56,260	306,262	30,899	80,016	21,916
Estimated total non-sampled insts	247,070	22,002	37,046	45,345	20,422	91,232	5,244	19,447	6,331

NOTE: Because of rounding, detail may not add to totals.

KEY: ... = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-40. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions	13,810,064	2,216,355	1,639,390	993,769	718,023	7,388,936	254,039	427,181	172,372
1 Johns Hopkins Univ	710,119	209,128	115,030	29,088	115,758	228,357	1,004	8,301	3,453
2 U of Washington	312,695	17,843	14,935	55,434	7,209	202,810	7,400	7,064	0
3 U CA San Diego	291,917	23,959	35,088	83,625	1,190	143,141	3,367	1,547	0
4 Stanford University	281,641	80,295	49,801	8,042	21,183	119,501	2,030	789	0
5 University of Michigan	281,062	65,291	13,688	17,551	4,993	144,865	5,571	25,039	4,064
6 MA Institute of Tech	271,544	112,703	84,821	10,993	13,513	29,882	3,800	2,941	12,891
7 U CA Los Angeles	236,635	21,352	20,674	9,948	9,706	161,934	5,568	6,476	977
8 U WI Madison	233,174	32,616	29,470	16,228	7,659	120,169	11,671	15,356	5
9 U CA San Francisco	221,864	0	0	0	0	221,864	0	0	0
10 U of Pennsylvania	216,167	9,514	22,397	98	7,577	164,593	1,920	10,068	0
Total, 1st 10 institutions	3,056,818	572,701	385,904	231,007	188,788	1,537,116	42,331	77,581	21,390
11 Cornell University	203,082	29,517	40,847	2,366	25,430	99,877	2,252	2,793	0
12 Harvard University	203,047	2,234	23,200	8,452	2,281	129,710	2,602	25,660	8,908
13 University of Minnesota	198,927	21,388	13,231	4,486	13,147	139,154	5,672	1,849	0
14 Columbia University	195,652	7,663	17,757	34,634	4,564	124,483	2,222	4,329	0
15 Pennsylvania State U	190,688	90,452	16,779	13,128	5,646	48,236	4,352	9,831	2,264
16 U of Southern California	179,281	30,032	7,608	10,695	36,386	88,447	2,122	3,200	791
17 University of Colorado	177,517	16,142	24,514	32,039	6,798	89,607	4,835	3,578	4
18 Yale University	176,994	4,981	14,097	1,836	3,218	149,625	2,388	849	0
19 U CA Berkeley	168,171	35,130	48,383	3,043	4,563	67,682	4,334	4,320	716
20 U of NC Chapel Hill	157,034	0	7,775	6,299	6,375	108,904	3,798	23,883	0
Total, 1st 20 institutions	4,907,211	810,240	600,095	347,985	297,196	2,582,841	76,908	157,873	34,073
21 Washington University	155,197	3,162	6,272	2,666	5,842	135,203	700	1,352	0
22 University of Arizona	154,004	12,466	52,810	4,837	5,780	72,090	744	4,654	623
23 University of Pittsburgh	149,960	4,965	9,267	128	1,993	125,971	2,909	2,154	2,573
24 Duke University	149,631	7,015	11,461	2,057	2,182	115,906	3,296	7,714	0
25 Texas A&M University	148,675	32,278	13,688	54,241	2,886	40,087	643	4,602	250
26 U TX Austin	147,808	65,877	37,281	10,274	7,751	15,812	3,255	7,246	312
27 U of Illinois Urbana	144,203	35,736	32,154	6,658	4,811	29,516	4,042	4,281	27,005
28 California Inst of Tech	142,474	26,507	70,337	14,065	10,032	20,351	0	847	335
29 U CA Davis	130,188	8,187	9,142	3,528	2,035	105,275	1,547	474	0
30 U of Alabama Birmingham	125,804	3,848	908	10	226	119,858	793	161	0
Total, 1st 30 institutions	6,355,155	1,010,281	843,415	446,449	340,734	3,362,910	94,837	191,358	65,171
31 Ohio State University	118,811	18,412	13,950	6,641	4,357	61,724	1,961	10,311	1,455
32 Georgia Institute of Tech	116,155	76,917	9,258	6,536	15,807	2,466	1,256	3,104	811
33 University of Chicago	114,123	0	25,134	3,999	2,646	80,687	1,347	310	0
34 University of Rochester	112,933	27,679	12,030	268	3,238	65,869	3,230	619	0
35 Case Western Reserve U	109,901	16,825	4,080	306	230	86,625	441	1,394	0
36 U of Iowa	105,646	8,885	11,140	230	1,074	81,645	1,580	1,092	0
37 Northwestern University	100,810	17,925	8,677	339	4,055	56,999	1,196	2,260	9,359
38 U MD College Park	99,688	33,374	29,390	6,853	10,590	8,899	1,317	9,265	0
39 University of Miami	96,716	1,439	1,652	23,795	498	61,623	2,499	5,184	26
40 Vanderbilt University	95,684	6,586	6,985	251	665	77,157	1,994	2,046	0
Total, 1st 40 institutions	7,425,622	1,218,323	965,711	495,667	383,894	3,946,604	111,658	226,943	76,822
41 Emory University	95,237	0	4,468	0	766	88,425	1,245	333	0
42 University of Utah	93,788	12,866	8,812	2,835	10,478	57,785	779	233	0
43 Baylor Col of Medicine	92,294	0	0	0	0	92,294	0	0	0
44 Carnegie Mellon U	91,830	19,500	6,133	393	50,814	6,613	3,780	3,113	1,484
45 Purdue University	91,632	32,428	13,035	2,840	5,206	33,653	1,522	2,733	215
46 Indiana University	90,881	2,237	20,317	822	3,248	56,549	4,660	3,004	44
47 New York University	90,010	0	3,544	117	8,472	72,872	4,112	806	87
48 Boston University	87,947	6,508	9,904	833	2,794	59,631	157	923	7,197
49 SUNY Buffalo	87,813	15,074	5,124	416	5,299	52,205	6,417	3,278	0
50 University of Florida	84,973	16,988	7,181	1,134	4,074	52,724	1,444	1,131	297
Total, 1st 50 institutions	8,332,027	1,323,924	1,044,229	505,057	475,045	4,519,355	135,774	242,497	86,146

See explanatory information and SOURCE at end of table

Table B-40. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 Georgetown University	81,704	0	3,828	435	98	75,805	138	1,383	17
52 U TX SW Med Ctr Dallas	81,468	0	0	0	0	81,468	0	0	0
53 University of Virginia	80,589	13,683	10,022	3,134	3,445	47,783	2,150	247	125
54 VA Polytech Inst & St U	80,319	22,086	5,232	29,860	2,785	17,614	1,473	1,269	0
55 Oregon State University	79,977	11,552	4,562	23,016	949	39,057	27	807	7
56 SUNY Stony Brook	79,570	4,197	15,076	11,468	4,151	41,015	2,039	1,624	0
57 Michigan State University	77,243	5,224	17,951	102	2,697	43,889	1,227	6,132	21
58 University of New Mexico	76,850	23,927	4,507	1,590	3,828	22,345	2,446	2,221	15,986
59 Colorado State University	74,930	7,940	6,502	10,331	1,238	39,003	2,095	2,227	5,594
60 NC State U Raleigh	74,485	27,946	7,124	6,164	3,553	26,979	433	1,250	1,036
Total, 1st 60 institutions	9,119,162	1,440,479	1,119,033	591,157	497,789	4,954,313	147,802	259,657	108,932
61 U of Tennessee System	73,724	11,854	6,874	8,343	7,659	36,635	104	1,701	554
62 U CA Santa Barbara	73,400	32,039	17,661	8,987	5,189	2,335	2,589	4,356	244
63 Yeshiva University	73,396	0	0	0	0	73,396	0	0	0
64 U CA Irvine	72,994	6,411	16,247	1,788	2,239	42,129	1,896	2,247	37
65 Princeton University	69,386	22,847	18,380	5,696	3,739	11,985	4,518	2,222	0
66 Rutgers the State U NJ	67,588	11,645	9,614	4,946	8,810	22,617	3,502	6,405	49
67 U of MD Baltimore	65,211	0	0	0	0	65,211	0	0	0
68 Louisiana St U, All Camp	64,524	12,889	6,057	7,585	719	35,603	171	1,481	19
69 Woods Hole Oceanograph	61,820	11,486	0	50,334	0	0	0	0	0
70 CUNY Mt Sinai Sch Med	61,599	0	0	0	0	61,599	0	0	0
Total, 1st 70 institutions	9,802,804	1,549,650	1,193,866	678,836	526,143	5,305,823	160,582	278,069	109,835
71 UT-Houston Hlth Sci Ctr	61,456	0	0	0	0	61,456	0	0	0
72 University of IL Chicago	58,991	4,740	3,671	44	2,135	42,757	2,621	2,895	128
73 University of Georgia	56,254	604	3,603	2,888	1,007	43,627	2,206	2,319	0
74 Wake Forest University	55,845	0	1,084	0	159	54,124	0	478	0
75 Iowa State University	54,904	19,036	5,640	677	3,256	20,134	125	5,744	292
76 New Mexico State Univ	53,552	36,132	2,606	3,904	2,442	7,455	63	787	163
77 Tufts University	53,508	2,536	4,814	0	650	43,697	1,192	619	0
78 University of Connecticut	53,009	7,253	1,627	3,425	717	35,719	2,670	1,598	0
79 University of Cincinnati	52,561	10,952	1,968	89	311	38,541	52	351	297
80 Thomas Jefferson U	51,475	0	0	0	0	51,475	0	0	0
Total, 1st 80 institutions	10,354,359	1,630,903	1,218,879	689,863	536,820	5,704,808	169,511	292,860	110,715
81 University of Kentucky	51,450	7,283	2,937	196	1,488	36,567	625	1,190	1,164
82 Oregon Health Sciences U	51,338	0	0	0	0	48,222	3,116	0	0
83 U of South Carolina	51,269	12,632	7,748	6,033	4,034	11,586	1,348	4,264	3,624
84 U TX Hlth Sci Ctr San Ant	51,203	0	0	0	0	51,203	0	0	0
85 Tulane University	49,720	4,127	2,016	30	513	40,152	373	204	2,305
86 Washington State U	48,807	5,982	3,738	288	277	23,722	126	5,283	9,391
87 SUNY Albany	48,395	0	1,545	3,324	377	37,400	2,401	3,348	0
88 U Med & Dent NJ	47,505	0	0	0	0	47,505	0	0	0
89 Wayne State University	46,264	2,875	3,479	0	445	37,545	1,155	765	0
90 Virginia Commonwealth U	45,454	71	1,661	0	117	42,904	372	329	0
Total, 1st 90 institutions	10,845,764	1,663,873	1,242,003	699,734	544,071	6,061,614	179,027	308,243	127,199
91 Utah State University	43,764	17,793	4,012	8,880	312	9,548	80	1,627	791
92 U TX MD Anderson Cncr	42,794	0	1,858	0	227	40,709	0	0	0
93 University of Oklahoma	42,679	4,380	4,516	7,149	669	20,909	1,354	3,702	0
94 Brown University	42,139	7,150	5,362	3,869	6,868	16,920	1,403	567	0
95 University of Kansas	41,858	3,771	4,010	2,275	510	25,069	868	177	5,178
96 Med U of South Carolina	40,637	0	0	0	0	40,637	0	0	0
97 U MA Worcester	40,198	0	0	0	0	40,198	0	0	0
98 Univ of Hawaii Manoa	40,198	1,901	15,211	4,108	1,454	15,155	17	733	1,619
99 Dartmouth College	39,682	3,915	2,861	561	878	30,703	579	185	0
100 Florida State University	39,527	889	19,908	9,084	2,646	5,062	1,346	592	0
Total, 1st 100 institutions	11,259,240	1,703,672	1,299,741	735,660	557,635	6,326,524	185,395	315,826	134,787

See explanatory information and SOURCE at end of table.

Table B-40. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
101 Arizona State University	38,947	9,826	9,740	6,748	1,678	4,963	3,196	2,183	613
102 U TX Med Br Galveston	38,323	0	0	0	0	38,323	0	0	0
103 U MA Amherst	37,969	5,294	13,024	2,373	7,082	7,890	1,992	314	0
104 The Rockefeller Univ	37,369	0	3,486	0	148	33,735	0	0	0
105 U of Rhode Island	36,337	3,621	904	21,544	220	3,878	3,382	2,284	504
106 Mississippi State U	34,637	13,058	1,567	2,496	646	13,709	0	1,781	1,380
107 Medical Col of Wisconsin	34,527	0	0	0	0	34,527	0	0	0
108 University of Dayton	34,413	30,375	3,020	443	105	390	80	0	0
109 U of Missouri Columbia	33,397	2,805	1,631	226	470	23,546	1,546	3,151	22
110 Rice University	33,238	2,872	7,451	7,127	11,736	3,664	214	174	0
Total, 1st 110 institutions	11,618,397	1,771,523	1,340,564	776,617	579,720	6,491,149	195,805	325,713	137,306
111 U of Nebraska Lincoln	32,352	3,295	4,271	6,328	576	16,583	512	645	142
112 U CA Santa Cruz	31,727	2,156	12,064	8,231	1,369	6,786	456	664	1
113 University of Vermont	31,521	1,370	662	62	160	27,716	159	0	1,392
114 Auburn University	31,401	12,270	1,920	287	515	10,334	784	344	4,947
115 West Virginia University	30,800	7,986	1,101	5,196	3,842	10,856	0	145	1,674
116 George Washington U	30,490	6,816	1,384	18	6,529	12,226	398	2,918	201
117 U of Alaska Fairbanks	30,351	608	7,518	17,114	17	4,663	0	431	0
118 US Naval Postgrad School	29,873	7,439	2,377	4,866	7,527	0	0	5,660	2,004
119 U of South Florida	29,751	6,612	779	8,212	894	10,704	1,696	854	0
120 University of Delaware	29,509	9,468	5,996	6,043	3,130	2,224	608	2,040	0
Total, 1st 120 institutions	11,926,172	1,829,543	1,378,636	832,974	604,279	6,593,241	200,418	339,414	147,667
121 Temple University	28,720	112	838	0	144	19,628	3,103	4,855	40
122 Clemson University	28,109	8,636	1,727	404	1,223	13,525	5	2,282	307
123 Loyola U of Chicago	27,931	0	355	0	568	25,510	594	904	0
124 U CA Riverside	27,727	1,596	4,948	2,425	484	16,940	1,151	183	0
125 Allegheny U of Hlth Sci	27,723	0	0	0	0	27,723	0	0	0
126 University of Oregon	26,411	1,234	5,933	1,565	2,775	12,841	1,281	782	0
127 Howard University	26,253	3,613	5,007	2	5,626	7,762	1,269	2,146	828
128 U of Alabama Huntsville	26,141	8,862	6,694	5,274	2,800	162	0	14	2,335
129 University of Houston	25,448	11,920	4,134	244	2,296	4,304	2,036	487	27
130 Clark Atlanta University	25,345	4,511	4,789	6,072	2,802	6,628	0	543	0
Total, 1st 130 institutions	12,195,980	1,870,027	1,413,061	848,960	622,997	6,728,264	209,857	351,610	151,204
131 Oklahoma State University	25,034	9,277	2,067	134	559	11,812	66	625	494
132 Kansas State University	24,769	4,755	4,804	155	466	13,470	279	530	310
133 Rensselaer Polytech Inst	24,748	17,267	3,576	899	1,793	528	169	92	424
134 Unif Svcs U of Hlth Sci	24,621	0	0	0	0	24,621	0	0	0
135 Univ of North Dakota	23,976	17,922	52	475	0	4,160	11	674	682
136 U of New Hampshire	23,305	1,312	1,180	15,206	328	3,525	237	1,517	0
137 Brandeis University	23,233	0	2,966	0	1,096	12,497	1,003	5,671	0
138 Rush University	22,480	0	0	0	0	21,876	604	0	0
139 Lehigh University	22,409	17,526	2,834	1,054	228	712	54	1	0
140 Saint Louis University	21,483	13	0	1,017	27	20,380	43	3	0
Total, 1st 140 institutions	12,432,038	1,938,099	1,430,540	867,900	627,494	6,841,845	212,323	360,723	153,114
141 U of Nevada Reno	20,971	3,632	1,277	3,967	43	10,974	278	451	349
142 NJ Inst of Technology	20,561	11,203	1,221	4,610	1,491	0	0	69	1,967
143 Florida A&M University	20,118	3,887	2,912	2,361	1,270	9,673	0	15	0
144 U PR Mayaguez	19,568	1,280	444	4,424	307	13,081	0	32	0
145 SUNY Hlth Sci Ctr Brklyn	19,072	0	0	0	0	19,072	0	0	0
146 University of Notre Dame	18,886	5,084	9,944	0	901	2,631	294	32	0
147 U of Central Florida	18,714	12,596	4,619	0	388	350	759	2	0
148 Syracuse University	18,361	5,387	3,745	420	3,527	2,845	442	1,254	741
149 Montana St U Bozeman	17,667	2,555	4,154	332	264	9,257	0	746	359
150 San Diego St University	17,181	1,546	1,156	1,004	169	9,548	2,676	348	734
Total, 1st 150 institutions	12,623,137	1,985,269	1,460,012	885,018	635,854	6,919,276	216,772	363,672	157,264

See explanatory information and SOURCE at end of table

Table B-40. Federally financed R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engi-neering	Physical sciences	Environ-mental sciences	Math & computer sciences	Life sciences	Psy-chology	Social sciences	Other sciences
151 U Arkansas Medical Sci	16,796	0	0	0	0	16,796	0	0	0
152 University of Idaho	16,481	1,751	882	472	16	13,249	0	111	0
153 George Mason University	16,430	6,091	2,105	219	2,463	364	1,279	3,909	0
154 U of Maine	16,211	945	548	3,524	97	10,664	202	231	0
155 CUNY City College	16,169	5,398	6,906	170	812	2,533	286	64	0
156 U Arkansas Main	16,019	3,980	2,251	742	8	8,369	97	296	276
157 U Mississippi, All Camp	15,571	2,605	3,178	0	29	9,402	121	236	0
158 C R Drew U of Med & Sci	15,288	0	0	0	0	15,288	0	0	0
159 University of Wyoming	14,991	840	2,066	3,933	495	7,071	128	278	180
160 U TX Arlington	14,804	4,591	1,017	314	7,959	237	24	380	272
Total, 1st 160 institutions	12,781,897	2,011,470	1,478,965	894,392	647,733	7,003,249	218,909	369,187	157,992
161 Northeastern University	14,706	6,252	3,401	0	1,299	2,599	815	340	0
162 Desert Research Institute	14,600	0	0	8,600	0	2,900	0	3,100	0
163 U of NE Med Ctr Omaha	14,029	0	0	0	0	14,029	0	0	0
164 Michigan Tech University	13,978	8,140	1,471	1,667	324	2,085	0	291	0
165 Florida International U	13,415	7,034	1,014	212	383	1,932	739	2,101	0
166 University of Louisville	13,306	1,051	1,178	0	409	10,388	44	236	0
167 Col of William & Mary	13,020	0	4,133	7,286	630	533	73	365	0
168 Texas Tech University	13,013	3,223	1,543	192	860	5,878	45	1,264	8
169 NC A&T State University	12,521	7,882	329	0	231	3,745	35	299	0
170 The University of Alabama	12,238	6,356	1,816	893	484	1,067	97	1,412	113
Total, 1st 170 institutions	12,916,723	2,051,408	1,493,850	913,242	652,353	7,048,405	220,757	378,595	158,113
171 U PR Med Sci Campus	12,191	0	0	0	0	12,191	0	0	0
172 Morehouse School of Med	11,747	0	0	0	0	11,084	0	0	663
173 North Dakota State U	11,683	2,631	1,774	114	310	5,515	494	760	85
174 New York Medical College	11,657	0	0	0	0	11,657	0	0	0
175 Drexel University	11,613	8,685	1,151	668	311	421	0	377	0
176 The University of Montana	11,591	0	235	120	2,873	8,044	26	293	0
177 Medical Col of Georgia	11,338	0	0	0	0	11,338	0	0	0
178 Oregon Grad Inst Sci Tech	11,215	891	3,479	1,429	5,416	0	0	0	0
179 Illinois Inst of Tech	11,183	3,289	3,359	0	1,745	2,790	0	0	0
180 U of Nevada Las Vegas	11,142	991i	2,253i	4,153i	2,120i	1,212i	21i	260i	132i
Total, 1st 180 institutions	13,032,083	2,067,895	1,506,101	919,726	665,128	7,112,657	221,298	380,285	158,993
181 Boston College	11,137	0	3,147	601	5,780	1,176	181	252	0
182 Meharry Medical College	11,004	0	0	673	0	10,331	0	0	0
183 Mercer University	10,832	9,939	310	0	0	583	0	0	0
184 U TX El Paso	10,471	2,708	714	2,680	820	1,786	482	1,281	0
185 Prairie View A&M U	10,325	4,550	1,043	56	461	4,215	0	0	0
186 U MA Lowell	10,257	3,886	4,626	23	457	903	46	57	259
187 Eastern VA Med School	10,203	0	0	0	0	10,203	0	0	0
188 U of South Alabama	9,747	366	245	225	305	8,225	201	180	0
189 Med Col of Ohio Toledo	9,559	0	0	0	0	9,559	0	0	0
190 Colorado School of Mines	9,534	7,028	1,551	338	529	0	0	88	0
Total, 1st 190 institutions	13,135,152	2,096,372	1,517,737	924,322	673,480	7,159,638	222,208	382,143	159,252
191 Wright State University	9,502	1,188	1,406	7	195	6,351	355	0	0
192 Old Dominion University	9,266	3,927	1,842	1,858	936	530	16	157	0
193 Stevens Inst of Tech	9,222	7,319	669	0	40	0	0	1,194	0
194 Western Illinois U	9,016	2,106	1,342	635	1,736	1,663	189	1,345	0
195 Sthrn IL U Carbondale	8,836	1,253	290	84	124	5,610	415	405	655
196 Brigham Young University	8,752	4,883i	1,140i	112i	257i	1,465i	85i	810i	0i
197 Alabama A&M University	8,382i	421i	4,481i	0i	0i	3,437i	0i	43i	0i
198 Tuskegee University	8,231	1,033	364	0	0	6,752	0	82	0
199 U MD Baltimore County	8,135	2,004	2,403	0	944	1,840	686	258	0
200 Ohio University	8,046	4,827	1,353	35	67	1,456	289	9	10
Total, 1st 200 institutions	13,222,540	2,125,333	1,533,027	927,053	677,779	7,188,742	224,243	386,446	159,917
Total, all other sampled insts	459,196	77,155	82,518	44,486	26,608	162,549	25,585	30,258	10,037
Estimated total non-sampled insts	128,328	13,867	23,845	22,230	13,636	37,645	4,211	10,477	2,418

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-41. Non-Federal R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions	9,185,399	1,458,451	620,891	484,104	273,153	5,307,715	118,267	676,530	246,288
1 Texas A&M University	218,308	65,570	8,864	17,600	4,492	103,508	949	13,938	3,387
2 University of Michigan	187,814	43,377	5,491	5,389	8,124	85,604	4,147	33,903	1,779
3 U WI Madison	179,396	20,478	9,969	7,680	2,081	121,655	3,318	14,388	827
4 University of Georgia	153,103	4,342	5,998	6,997	5,181	102,991	3,491	24,103	0
5 U CA Berkeley	148,149	33,870	18,798	2,180	581	57,966	1,997	28,239	4,509
6 Pennsylvania State U	147,250	48,266	8,385	10,094	2,057	46,164	2,260	20,347	9,677
7 Ohio State University	143,336	42,991	6,279	3,237	8,328	72,152	1,021	7,515	1,813
8 University of Minnesota	142,252	12,692	2,691	5,961	3,119	105,739	1,526	10,524	0
9 Cornell University	136,452	15,207	9,392	1,492	5,930	93,484	2,505	8,442	0
10 Louisiana St U, All Camp	131,804	21,878	5,084	15,636	2,006	80,131	185	5,744	1,140
Total, 1st 10 institutions	1,587,864	308,671	79,951	76,275	41,899	869,394	21,399	167,143	23,132
11 University of Florida	128,126	13,458	6,289	2,029	1,332	99,923	732	3,160	1,203
12 University of Arizona	125,652	8,430	31,833	4,319	1,626	70,830	1,195	7,007	412
13 U CA Davis	124,416	9,162	1,363	2,105	177	109,631	95	1,678	205
14 U of Illinois Urbana	122,805	25,976	9,878	20,580	2,965	34,118	1,524	11,827	15,937
15 U CA Los Angeles	118,010	7,157	3,405	5,138	1,228	79,260	2,108	18,486	1,228
16 Rutgers the State U NJ	117,515	13,041	8,782	8,350	7,444	61,814	3,441	10,757	3,886
17 U MD College Park	117,269	32,163	27,300	3,573	10,570	22,386	662	20,615	0
18 NC State U Raleigh	116,263	33,763	5,110	5,654	4,004	61,793	531	3,681	1,727
19 Purdue University	115,319	30,062	6,057	1,335	3,363	58,117	904	15,226	255
20 Georgia Institute of Tech	109,478	72,495	8,726	6,160	14,899	2,324	1,184	2,925	765
Total, 1st 20 institutions	2,782,717	554,378	188,694	135,518	89,507	1,469,590	33,775	262,505	48,750
21 MA Institute of Tech	109,068	52,113	12,529	3,368	6,081	6,222	3,413	11,467	13,875
22 Michigan State University	105,346	11,179	9,920	470	4,848	72,277	1,023	5,376	253
23 U CA San Francisco	98,893	0	0	0	0	98,893	0	0	0
24 Iowa State University	97,010	23,114	3,767	682	7,811	51,020	584	5,611	4,421
25 University of Connecticut	94,513	26,947	2,269	5,091	1,824	42,924	2,985	10,559	1,914
26 U TX Austin	93,798	35,345	13,234	15,756	5,349	6,364	1,092	9,952	6,706
27 U of Washington	93,777	13,944	5,164	2,964	1,132	63,785	905	5,883	0
28 Duke University	92,604	3,651	1,905	913	746	81,307	947	3,135	0
29 Baylor Col of Medicine	92,319	0	0	0	0	92,319	0	0	0
30 U of Missouri Columbia	89,736	10,519	4,427	496	673	64,594	1,294	7,560	173
Total, 1st 30 institutions	3,749,781	731,190	241,909	165,258	117,971	2,049,295	46,018	322,048	76,092
31 Johns Hopkins Univ	88,349	4,337	3,434	1,090	993	62,503	27	3,660	12,305
32 Northwestern University	86,452	10,477	3,167	169	675	46,210	262	2,561	22,931
33 U CA San Diego	79,592	7,414	4,549	25,635	396	36,858	849	3,519	372
34 Harvard University	79,396	2,178	2,045	3,143	386	48,598	571	19,893	2,582
35 U TX MD Anderson Cncr	78,170	0	680	0	2,332	75,158	0	0	0
36 U of Tennessee System	75,607	15,590	4,329	4,743	4,158	42,459	122	3,068	1,138
37 University of Colorado	73,784	14,646	16,281	8,680	2,188	27,257	2,284	2,415	33
38 U of Iowa	72,582	11,080	3,720	1,414	661	49,439	343	5,126	799
39 U of Pennsylvania	72,263	3,050	2,081	524	669	52,243	232	13,464	0
40 U of Nebraska Lincoln	70,108	12,129	1,511	2,447	754	49,290	906	2,868	203
Total, 1st 40 institutions	4,526,084	812,091	283,706	213,103	131,183	2,539,310	51,614	378,622	116,455
41 The Rockefeller Univ	68,226	0	2,992	0	339	64,895	0	0	0
42 University of Kentucky	67,271	12,282	236	52	42	48,948	0	924	4,787
43 University of Oklahoma	66,392	11,184	5,159	9,683	1,587	26,949	3,226	8,604	0
44 Wayne State University	65,887	6,564	5,170	0	542	47,058	731	4,158	1,664
45 U of Southern California	64,977	6,901	1,680	2,372	1,640	47,401	324	3,440	1,219
46 U of South Florida	64,406	9,889	1,032	3,419	139	45,742	2,978	1,207	0
47 Indiana University	64,067	1,637	6,328	1,031	1,032	37,951	2,186	9,670	4,232
48 VA Polytech Inst & St U	63,496	17,476	4,110	1,926	1,548	34,810	718	2,908	0
49 Washington University	63,443	1,752	2,096	501	1,244	57,375	149	326	0
50 University of IL Chicago	62,549	5,806	2,782	930	846	46,104	866	4,633	582
Total, 1st 50 institutions	5,176,798	885,582	315,291	233,017	140,142	2,996,543	62,792	414,492	128,939

See explanatory information and SOURCE at end of table

Table B-41. Non-Federal R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 University of Kansas	58,791	4,337	4,635	7,085	146	35,028	352	2,342	4,866
52 Oklahoma State University	57,926	10,134	4,126	1,052	934	35,237	486	4,075	1,882
53 Yale University	57,907	1,604	1,756	415	732	49,403	2,506	1,491	0
54 U of MD Baltimore	56,996	0	0	0	0	56,996	0	0	0
55 Clemson University	56,727	17,430	3,485	816	2,469	27,295	7	4,604	621
56 Auburn University	55,957	6,309	952	135	91	36,386	58	1,697	10,329
57 New York University	55,864	0	3,456	353	2,471	43,565	661	4,513	845
58 University of Virginia	54,264	7,414	2,139	1,447	1,150	36,778	556	4,444	336
59 Emory University	53,931	0	1,821	0	237	47,918	284	3,671	0
60 Colorado State University	51,771	9,466	1,624	2,522	1,618	27,163	299	6,980	2,099
Total, 1st 60 institutions	5,736,932	942,276	339,285	246,842	149,990	3,392,312	68,001	448,309	149,917
61 U of NC Chapel Hill	51,495	0	1,985	3,217	2,253	37,988	250	5,802	0
62 Oregon State University	51,357	5,753	1,087	1,763	1,659	37,713	66	3,011	305
63 U Med & Dent NJ	51,030	0	0	0	0	51,030	0	0	0
64 SUNY Buffalo	49,888	8,293	2,914	456	1,122	35,002	581	1,315	205
65 Washington State U	49,834	4,594	1,117	235	123	35,736	182	7,408	439
66 Mississippi State U	49,487	4,998	542	404	21	39,417	8	2,667	1,430
67 U TX SW Med Ctr Dallas	48,694	0	0	0	0	48,694	0	0	0
68 SUNY Stony Brook	46,807	3,403	7,739	6,033	2,291	25,019	575	1,745	2
69 U CA Irvine	46,653	6,637	4,249	360	1,257	31,672	57	1,989	432
70 Kansas State University	46,453	6,621	930	83	535	34,949	546	1,665	1,124
Total, 1st 70 institutions	6,228,630	982,575	359,848	259,393	159,251	3,769,532	70,266	473,911	153,854
71 Arizona State University	45,706	18,321	9,222	418	1,389	5,233	1,370	6,164	3,589
72 Carnegie Mellon U	44,684	13,327	1,932	1,771	13,980	7,336	1,511	3,050	1,777
73 U of Alabama Birmingham	44,389	4,167	464	0	33	39,429	177	119	0
74 U CA Riverside	43,768	4,491	527	1,834	442	35,933	23	518	0
75 U Arkansas Main	43,734	5,116	2,076	1,987	810	30,351	440	2,855	99
76 Stanford University	43,180	8,936	1,246	1,864	2,686	23,315	362	4,771	0
77 Princeton University	42,994	13,600	6,538	3,175	2,968	6,855	1,225	8,633	0
78 U of Alaska Fairbanks	41,030	3,096	6,234	14,930	77	13,694	0	2,999	0
79 Columbia University	40,751	5,203	2,780	2,753	876	26,791	165	2,183	0
80 University of Pittsburgh	39,866	3,308	1,393	27	409	31,932	114	2,545	138
Total, 1st 80 institutions	6,658,732	1,062,140	392,260	288,152	182,921	3,990,401	75,653	507,748	159,457
81 University of New Mexico	39,768	12,074	1,750	603	440	10,751	837	5,463	7,850
82 University of Idaho	39,717	6,726	1,160	2,342	121	27,961	207	1,200	0
83 Florida State University	38,598	746	21,764	5,599	1,141	4,930	1,313	3,105	0
84 Utah State University	37,945	6,426	1,458	4,110	830	17,013	365	1,587	6,156
85 University of Cincinnati	36,725	6,946	1,864	81	85	26,225	218	364	942
86 U MA Amherst	35,709	5,391	7,623	3,669	4,814	12,497	537	770	408
87 U TX Med Br Galveston	35,436	0	0	0	0	35,436	0	0	0
88 Tulane University	33,940	2,825	1,116	154	148	28,017	144	80	1,456
89 Virginia Commonwealth U	33,564	267	1,948	0	454	29,112	769	1,014	0
90 Case Western Reserve U	33,534	8,800	1,371	131	303	19,847	120	2,962	0
Total, 1st 90 institutions	7,023,668	1,112,341	432,314	304,841	191,257	4,202,190	80,163	524,293	176,269
91 University of Miami	33,340	682	171	4,580	178	27,457	100	142	30
92 Univ of Hawaii Manoa	33,104	851	6,858	4,027	110	16,958	148	2,157	1,995
93 Montana St U Bozeman	32,430	5,281	3,069	275	507	21,312	0	1,163	823
94 University of Rochester	31,981	3,425	773	60	104	24,274	2,871	163	311
95 North Dakota State U	31,978	2,807	1,510	71	296	24,893	135	2,191	75
96 U TX Hlth Sci Ctr San Ant	31,825	0	0	0	0	31,825	0	0	0
97 Georgetown University	30,878	0	847	373	807	27,349	22	1,408	72
98 CUNY Mt Sinai Sch Med	30,806	0	0	0	0	30,806	0	0	0
99 Texas Tech University	29,987	7,071	3,028	704	834	16,382	20	1,792	156
100 Oregon Health Sciences U	28,995	0	0	0	0	28,488	507	0	0
Total, 1st 100 institutions	7,338,992	1,132,458	448,570	314,931	194,093	4,451,934	83,966	533,309	179,731

See explanatory information and SOURCE at end of table.

Table B-41. Non-Federal R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engi-neering	Physical sciences	Environ-mental sciences	Math & computer sciences	Life sciences	Psy-chology	Social sciences	Other sciences
101 U of NE Med Ctr Omaha	28,583	0	0	0	0	28,583	0	0	0
102 Temple University	27,813	181	263	3	106	20,706	1,064	4,842	648
103 U of South Carolina	27,350	5,837	2,220	2,671	3,808	8,233	71	3,491	1,019
104 U of Nevada Reno	27,006	1,286	799	3,555	92	7,290	425	1,581	11,978
105 Rush University	26,292	0	0	0	0	23,180	3,112	0	0
106 San Diego St University	26,020	1,425	1,203	690	587	12,931	651	2,119	6,414
107 Tufts University	25,848	1,569	1,529	9	197	18,679	726	3,139	0
108 University of Wyoming	25,562	2,850	1,404	4,707	526	10,554	124	198	5,199
109 Brown University	25,482	3,099	3,429	1,472	3,661	9,284	737	3,800	0
110 U PR Mayaguez	24,934	3,194	689	283	70	20,643	0	55	0
Total, 1st 110 institutions	7,603,882	1,151,899	460,106	328,321	203,140	4,612,017	90,876	552,534	204,989
111 University of Delaware	24,645	7,901	2,505	2,162	1,377	9,320	498	882	0
112 Medical Col of Georgia	24,633	0	0	0	0	24,633	0	0	0
113 West Virginia University	24,044	5,056	371	1,683	450	14,452	29	1,515	488
114 University of Houston	23,730	13,292	4,532	902	1,350	2,281	829	540	4
115 University of Chicago	23,556	0	2,725	791	192	17,539	338	1,971	0
116 U MA Worcester	23,143	0	0	0	0	23,143	0	0	0
117 New Mexico State Univ	22,941	6,610	557	2,142	398	12,802	96	296	40
118 U of New Hampshire	22,388	1,914	476	9,486	622	4,664	43	1,873	3,310
119 Boston University	22,320	2,131	3,252	372	164	15,428	93	485	395
120 University of Vermont	22,138	721	319	223	125	19,050	236	91	1,373
Total, 1st 120 institutions	7,837,420	1,189,524	474,843	346,082	207,818	4,755,329	93,038	560,187	210,599
121 UT-Houston Hlth Sci Ctr	21,347	0	0	0	0	21,344	0	3	0
122 Vanderbilt University	21,319	2,317	923	10	162	16,357	459	1,091	0
123 Allegheny U of Hlth Sci	21,067	0	0	0	0	21,067	0	0	0
124 University of Utah	20,635	5,616	700	985	199	12,873	174	88	0
125 Sthrn IL U Carbondale	19,742	2,935	1,473	206	800	9,845	154	996	3,333
126 Wake Forest University	19,486	0	400	0	65	18,879	0	142	0
127 U CA Santa Cruz	19,335	299	11,658	3,273	338	2,801	229	708	29
128 SUNY Col Env Sci Frstry	18,948	6,922	1,012	2,063	0	8,852	0	99	0
129 George Washington U	18,773	1,842	521	19	676	12,118	58	3,428	111
130 NJ Inst of Technology	18,549	6,734	1,288	4,930	2,065	0	0	220	3,312
Total, 1st 130 institutions	8,036,621	1,216,189	492,818	357,568	212,123	4,879,465	94,112	566,962	217,384
131 U of Maine	18,473	2,855	922	2,598	40	11,173	48	836	1
132 Yeshiva University	18,034	0	0	0	0	18,034	0	0	0
133 U CA Santa Barbara	17,884	5,720	2,472	3,418	1,530	716	975	2,577	476
134 SUNY Albany	17,852	0	2,594	3,417	407	7,325	908	3,201	0
135 Thomas Jefferson U	17,679	0	0	0	0	17,679	0	0	0
136 U Arkansas Medical Sci	16,558	0	0	0	0	16,558	0	0	0
137 University of Louisville	16,349	1,056	561	22	118	13,183	20	1,389	0
138 Syracuse University	15,961	3,941	1,486	539	6,674	1,028	518	1,114	661
139 U MD Center for EES	15,450	0	0	15,450	0	0	0	0	0
140 U MD Biotechnology Inst	15,404	0	0	2,734	0	12,670	0	0	0
Total, 1st 140 institutions	8,206,265	1,229,761	500,853	385,746	220,892	4,977,831	96,581	576,079	218,522
141 U of Missouri Rolla	15,065	10,396	2,352	549	1,055	703	8	2	0
142 Loyola U of Chicago	14,634	0	173	0	203	12,127	425	1,188	518
143 California Inst of Tech	14,531	2,731	4,994	1,379	448	3,786	0	142	1,051
144 Med U of South Carolina	13,789	0	0	0	0	13,789	0	0	0
145 Brandeis University	13,527	0	819	0	226	5,016	209	7,257	0
146 The University of Memphis	13,475	2,574	81	2,328	414	1,706	2,263	2,612	1,497
147 NM Inst Mining & Tech	13,375	9,377	1,192	2,386	287	127	6	0	0
148 Dartmouth College	13,263	1,257	427	365	82	10,224	28	69	811
149 Rensselaer Polytech Inst	13,169	9,427	1,789	446	908	261	84	45	209
150 SUNY Hlth Sci Ctr Brklyn	12,848	0	0	0	0	12,848	0	0	0
Total, 1st 150 institutions	8,343,941	1,265,523	512,680	393,199	224,515	5,038,418	99,604	587,394	222,608

See explanatory information and SOURCE at end of table.

Table B-41. Non-Federal R&D expenditures at universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
151 SUNY Binghamton	12,839	4,170	1,824	248	865	1,471	2,341	1,920	0
152 Medical Col of Wisconsin	12,838	0	0	0	0	12,838	0	0	0
153 Lehigh University	12,371	10,389	1,267	114	222	201	63	115	0
154 Georgia State University	12,296	0	2,728	354	504	2,246	1,763	4,166	535
155 Unif Svcs U of Hlth Sci	12,230	0	0	0	0	12,230	0	0	0
156 Col of William & Mary	12,163	0	972	9,414	178	294	110	1,195	0
157 U of Alabama Huntsville	12,035	5,294	2,212	972	2,347	197	1	75	937
158 U WI Milwaukee	11,653	2,206	1,578	1,866	422	1,311	199	3,184	887
159 Woods Hole Oceanograph	11,195	2,827	0	8,368	0	0	0	0	0
160 University of Akron	10,714	3,956	5,626	59	233	415	36	389	0
Total, 1st 160 institutions	8,464,275	1,294,365	528,887	414,594	229,286	5,069,621	104,117	598,438	224,967
161 U Mississippi, All Camp	10,644	1,045	1,417	0	18	7,772	11	381	0
162 U of Southwestern LA	10,493	3,653	646	142	2,449	2,025	148	696	734
163 Ohio University	10,283	5,347	1,055	61	53	3,371	137	233	26
164 Oregon Grad Inst Sci Tech	10,197	2,057	3,049	1,959	3,132	0	0	0	0
165 Michigan Tech University	9,904	6,661	412	516	160	1,853	0	288	14
166 The University of Montana	9,830	0	313	238	165	5,847	2	861	2,404
167 Colorado School of Mines	9,757	7,378	674	210	1,493	0	0	2	0
168 The University of Alabama	9,568	3,728	1,572	1,043	1,183	562	20	1,262	198
169 South Dakota State U	9,425	811	309	246	8	7,599	0	452	0
170 Clark Atlanta University	9,221	1,203	1,211	2,948	1,563	1,957	0	339	0
Total, 1st 170 institutions	8,563,597	1,326,248	539,545	421,957	239,510	5,100,607	104,435	602,952	228,343
171 U TX Arlington	9,206	5,105	1,109	209	777	473	17	1,124	392
172 CUNY Hunter College	8,938	0	1,418	1,474	245	2,455	714	1,618	1,014
173 University of Dayton	8,775	6,775	1,074	5	51	395	1	3	471
174 Old Dominion University	8,311	2,340	698	3,701	365	1,054	32	121	0
175 U MA Boston	8,192	5	132	1,738	34	1,689	110	4,260	224
176 U TX Dallas	7,979	510	3,921	1,200	441	1,011	285	611	0
177 U of Missouri Kansas City	7,952	66	386	50	1,233	5,024	485	251	457
178 Tennessee Tech U	7,938	7,070	178	1	34	646	0	9	0
179 Wright State University	7,879	1,676	850	251	231	4,099	291	27	454
180 University of North Texas	7,758	347	1,721	638	402	1,030	731	946	1,943
Total, 1st 180 institutions	8,646,525	1,350,142	551,032	431,224	243,323	5,118,483	107,101	611,922	233,298
181 Drexel University	7,709	3,965	171	361	1,064	200	0	1,948	0
182 Wichita State University	7,708	6,739	368	22	109	413	3	54	0
183 U MA Lowell	7,577	4,566	800	1	283	1,130	126	521	150
184 Inst Paper Sci and Tech	7,542i	4,397i	2,231i	0i	0i	914i	0i	0i	0i
185 Eastern VA Med School	7,527	0	0	0	0	7,527	0	0	0
186 SUNY Hlth Sci Ctr Syrcse	7,329	0i	0i	0i	0i	7,329i	0i	0i	0i
187 Cleveland State U	7,296i	1,701i	158i	3i	19i	216i	3i	5,196i	0i
188 University of Oregon	7,243	306	1,372	359	674	2,408	639	1,485	0
189 Northern Illinois U	6,865	590	1,084	185	159	1,095	242	3,508	2
190 George Mason University	6,800	1,300	311	35	500	1,679	345	2,630	0
Total, 1st 190 institutions	8,720,121	1,373,706	557,527	432,190	246,131	5,141,394	108,459	627,264	233,450
191 Idaho State University	6,678	522	2,056	1,102	37	2,754	0	207	0
192 Western Michigan U	6,625	1,494i	127i	1,056i	781i	365i	0i	2,674i	128i
193 Creighton University	6,595	0	5	0	0	6,590	0	0	0
194 Rice University	6,458	2,258	1,245	889	807	1,254	0	5	0
195 Miami University (OH)	6,214	220i	1,458i	90i	0i	1,239i	219i	1,307i	1,681i
196 U MD Baltimore County	6,169	1,302	181	0	845	3,495	48	298	0
197 Stevens Inst of Tech	6,027	5,130	173	0	34	0	0	690	0
198 CUNY City College	5,997	3,491	1,314	129	19	977	62	5	0
199 U of Nevada Las Vegas	5,751	856i	794i	1,458i	580i	770i	28i	1,167i	98i
200 University of Notre Dame	5,670	2,243	1,588	0	326	1,355	105	53	0
Total, 1st 200 institutions	8,782,305	1,391,222	566,468	436,914	249,560	5,160,193	108,921	633,670	235,357
Total, all other sampled insts.	284,352	59,094	41,222	24,075	16,807	93,934	8,312	33,890	7,018
Estimated total non-sampled insts.	118,742	8,135	13,201	23,115	6,786	53,588	1,034	8,970	3,913

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-42. R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions	15,531,711	2,571,638	1,443,826	1,175,315	516,906	8,410,087	270,487	842,965	300,487
1 University of Michigan	468,876	108,668	19,179	22,940	13,117	230,469	9,718	58,942	5,843
2 U WI Madison	412,570	53,094	38,439	23,908	9,740	241,824	14,989	29,744	832
3 U of Washington	406,472	31,787	20,099	58,398	8,341	266,595	8,305	12,947	0
4 U CA San Diego	371,509	31,373	39,637	109,260	1,586	179,999	4,216	5,066	372
5 Texas A&M University	366,983	97,848	22,552	71,841	7,378	143,595	1,592	18,540	3,637
6 U CA Los Angeles	354,645	28,509	24,079	15,086	10,934	241,194	7,676	24,962	2,205
7 University of Minnesota	341,179	34,080	15,922	10,447	16,266	244,893	7,198	12,373	0
8 Pennsylvania State U	337,938	138,718	25,164	23,222	7,703	94,400	6,612	30,178	11,941
9 U CA San Francisco	320,757	0	0	0	0	320,757	0	0	0
10 U CA Berkeley	316,320	69,000	67,181	5,232	5,144	125,648	6,331	32,559	5,225
Total, 1st 10 institutions	3,697,249	593,077	272,252	340,334	80,209	2,089,374	66,637	225,311	30,055
11 University of Arizona	279,656	20,896	84,643	9,156	7,406	142,920	1,939	11,661	1,035
12 U of Illinois Urbana	267,008	61,712	42,032	27,238	7,776	63,634	5,566	16,108	42,942
13 Ohio State University	262,147	61,403	20,229	9,878	12,685	133,876	2,982	17,826	3,268
14 U CA Davis	254,604	17,349	10,505	5,633	2,212	214,906	1,642	2,152	205
15 University of Colorado	251,301	30,788	40,795	40,719	8,986	116,864	7,119	5,993	37
16 U TX Austin	241,606	101,222	50,515	26,030	13,100	22,176	4,347	17,198	7,018
17 Georgia Institute of Tech	225,633	149,412	17,984	12,696	30,706	4,790	2,440	6,029	1,576
18 U MD College Park	216,957	65,537	56,690	10,426	21,160	31,285	1,979	29,880	0
19 University of Florida	213,099	30,446	13,470	3,163	5,406	152,647	2,176	4,291	1,500
20 University of Georgia	209,357	4,946	9,601	9,885	6,188	146,618	5,697	26,422	0
Total, 1st 20 institutions	6,118,617	1,136,788	618,716	495,158	195,834	3,119,090	102,524	362,871	87,636
21 U of NC Chapel Hill	208,529	0	9,760	9,516	8,628	146,892	4,048	29,685	0
22 Purdue University	206,951	62,490	19,092	4,175	8,569	91,770	2,426	17,959	470
23 Louisiana St U, All Camp	196,328	34,767	11,141	23,221	2,725	115,734	356	7,225	1,159
24 NC State U Raleigh	190,748	61,709	12,234	11,818	7,557	88,772	964	4,931	2,763
25 University of Pittsburgh	189,826	8,273	10,660	155	2,402	157,903	3,023	4,699	2,711
26 Rutgers the State U NJ	185,103	24,686	18,396	13,296	16,254	84,431	6,943	17,162	3,935
27 Michigan State University	182,589	16,403	27,871	572	7,545	116,166	2,250	11,508	274
28 U of Iowa	178,228	19,965	14,860	1,644	1,735	131,084	1,923	6,218	799
29 U of Alabama Birmingham	170,193	8,015	1,372	10	259	159,287	970	280	0
30 Indiana University	154,948	3,874	26,645	1,853	4,280	94,500	6,846	12,674	4,276
Total, 1st 30 institutions	7,982,060	1,376,970	770,747	561,418	255,788	4,305,629	132,273	475,212	104,023
31 Iowa State University	151,914	42,150	9,407	1,359	11,067	71,154	709	11,355	4,713
32 U of Tennessee System	149,331	27,444	11,203	13,086	11,817	79,094	226	4,769	1,692
33 University of Connecticut	147,522	34,200	3,896	8,516	2,541	78,643	5,655	12,157	1,914
34 VA Polytech Inst & St U	143,815	39,562	9,342	31,786	4,333	52,424	2,191	4,177	0
35 SUNY Buffalo	137,701	23,367	8,038	872	6,421	87,207	6,998	4,593	205
36 University of Virginia	134,853	21,097	12,161	4,581	4,595	84,561	2,706	4,691	461
37 Oregon State University	131,334	17,305	5,649	24,779	2,608	76,770	93	3,818	312
38 U TX SW Med Ctr Dallas	130,162	0	0	0	0	130,162	0	0	0
39 Colorado State University	126,701	17,406	8,126	12,853	2,856	66,166	2,394	9,207	7,693
40 SUNY Stony Brook	126,377	7,600	22,815	17,501	6,442	66,034	2,614	3,369	2
Total, 1st 40 institutions	9,361,770	1,607,101	861,384	676,751	308,468	5,097,844	155,859	533,348	121,015
41 U of Missouri Columbia	123,133	13,324	6,058	722	1,143	88,140	2,840	10,711	195
42 U of MD Baltimore	122,207	0	0	0	0	122,207	0	0	0
43 University of IL Chicago	121,540	10,546	6,453	974	2,981	88,861	3,487	7,528	710
44 U TX MD Anderson Cncr	120,964	0	2,538	0	2,559	115,867	0	0	0
45 U CA Irvine	119,647	13,048	20,496	2,148	3,496	73,801	1,953	4,236	469
46 University of Kentucky	118,721	19,565	3,173	248	1,530	85,515	625	2,114	5,951
47 University of New Mexico	116,618	36,001	6,257	2,193	4,268	33,096	3,283	7,684	23,836
48 University of Utah	114,423	18,482	9,512	3,820	10,677	70,658	953	321	0
49 Wayne State University	112,151	9,439	8,649	0	987	84,603	1,886	4,923	1,664
50 University of Oklahoma	109,071	15,564	9,675	16,832	2,256	47,858	4,580	12,306	0
Total, 1st 50 institutions	10,540,245	1,743,070	934,195	703,688	338,365	5,908,450	175,466	583,171	153,840

See explanatory information and SOURCE at end of table

Table B-42. R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 U of Nebraska Lincoln	102,460	15,424	5,782	8,775	1,330	65,873	1,418	3,513	345
52 University of Kansas	100,649	8,108	8,645	9,360	656	60,097	1,220	2,519	10,044
53 Washington State U	98,641	10,576	4,855	523	400	59,458	308	12,691	9,830
54 U Med & Dent NJ	98,535	0	0	0	0	98,535	0	0	0
55 U of South Florida	94,157	16,501	1,811	11,631	1,033	56,446	4,674	2,061	0
56 U CA Santa Barbara	91,284	37,759	20,133	12,405	6,719	3,051	3,564	6,933	720
57 University of Cincinnati	89,286	17,898	3,832	170	396	64,766	270	715	1,239
58 Auburn University	87,358	18,579	2,872	422	606	46,720	842	2,041	15,276
59 Clemson University	84,836	26,066	5,212	1,220	3,692	40,820	12	6,886	928
60 Arizona State University	84,653	28,147	18,962	7,166	3,067	10,196	4,566	8,347	4,202
Total, 1st 60 institutions	11,472,104	1,922,128	1,006,299	755,360	356,264	6,414,412	192,340	628,877	196,424
61 Mississippi State U	84,124	18,056	2,109	2,900	667	53,126	8	4,448	2,810
62 U TX Hlth Sci Ctr San Ant	83,028	0	0	0	0	83,028	0	0	0
63 Oklahoma State University	82,960	19,411	6,193	1,186	1,493	47,049	552	4,700	2,376
64 UT-Houston Hlth Sci Ctr	82,803	0	0	0	0	82,800	0	3	0
65 Utah State University	81,709	24,219	5,470	12,990	1,142	26,561	1,166	3,214	6,947
66 Oregon Health Sciences U	80,333	0	0	0	0	76,710	3,623	0	0
67 Virginia Commonwealth U	79,018	338	3,609	0	571	72,016	1,141	1,343	0
68 U of South Carolina	78,619	18,469	9,968	8,704	7,842	19,819	1,419	7,755	4,643
69 Florida State University	78,125	1,635	41,672	14,683	3,787	9,992	2,659	3,697	0
70 New Mexico State Univ	76,493	42,742	3,163	6,046	2,840	20,257	159	1,083	203
Total, 1st 70 institutions	12,279,316	2,046,998	1,078,483	801,869	374,606	6,905,770	203,067	655,120	213,403
71 U TX Med Br Galveston	73,759	0	0	0	0	73,759	0	0	0
72 U MA Amherst	73,678	10,685	20,647	6,042	11,896	20,387	2,529	1,084	408
73 Univ of Hawaii Manoa	73,302	2,752	22,069	8,135	1,564	32,113	165	2,890	3,614
74 U CA Riverside	71,495	6,087	5,475	4,259	926	52,873	1,174	701	0
75 U of Alaska Fairbanks	71,381	3,704	13,752	32,044	94	18,357	0	3,430	0
76 Kansas State University	71,222	11,376	5,734	238	1,001	48,419	825	2,195	1,434
77 SUNY Albany	66,247	0	4,139	6,741	784	44,725	3,309	6,549	0
78 U MA Worcester	63,341	0	0	0	0	63,341	0	0	0
79 U Arkansas Main	59,753	9,096	4,327	2,729	818	38,720	537	3,151	375
80 Temple University	56,533	293	1,101	3	250	40,334	4,167	9,697	688
Total, 1st 80 institutions	12,960,027	2,090,991	1,155,727	862,060	391,939	7,338,798	215,773	684,817	219,922
81 University of Idaho	56,198	8,477	2,042	2,814	137	41,210	207	1,311	0
82 West Virginia University	54,844	13,042	1,472	6,879	4,292	25,308	29	1,660	2,162
83 Med U of South Carolina	54,426	0	0	0	0	54,426	0	0	0
84 University of Delaware	54,154	17,369	8,501	8,205	4,507	11,544	1,106	2,922	0
85 University of Vermont	53,659	2,091	981	285	285	46,766	395	91	2,765
86 U CA Santa Cruz	51,062	2,455	23,722	11,504	1,707	9,587	685	1,372	30
87 Montana St U Bozeman	50,097	7,836	7,223	607	771	30,569	0	1,909	1,182
88 University of Houston	49,178	25,212	8,666	1,146	3,646	6,585	2,865	1,027	31
89 U of Nevada Reno	47,977	4,918	2,076	7,522	135	18,264	703	2,032	12,327
90 U of New Hampshire	45,693	3,226	1,656	24,692	950	8,189	280	3,390	3,310
Total, 1st 90 institutions	13,477,315	2,175,617	1,212,066	925,714	408,369	7,591,246	222,043	700,531	241,729
91 U PR Mayaguez	44,502	4,474	1,133	4,707	377	33,724	0	87	0
92 North Dakota State U	43,661	5,438	3,284	185	606	30,408	629	2,951	160
93 San Diego St University	43,201	2,971	2,359	1,694	756	22,479	3,327	2,467	7,148
94 Texas Tech University	43,000	10,294	4,571	896	1,694	22,260	65	3,056	164
95 U of NE Med Ctr Omaha	42,612	0	0	0	0	42,612	0	0	0
96 University of Wyoming	40,553	3,690	3,470	8,640	1,021	17,625	252	476	5,379
97 U of Rhode Island	39,575	4,128	981	22,249	237	5,458	3,471	2,449	602
98 NJ Inst of Technology	39,110	17,937	2,509	9,540	3,556	0	0	289	5,279
99 U of Alabama Huntsville	38,176	14,156	8,906	6,246	5,147	359	1	89	3,272
100 Unif Svcs U of Hlth Sci	36,851	0	0	0	0	36,851	0	0	0
Total, 1st 100 institutions	13,888,556	2,238,705	1,239,279	979,871	421,763	7,803,022	229,788	712,395	263,733

See explanatory information and SOURCE at end of table

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Table B-42. R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
101 Medical Col of Georgia	35,971	0	0	0	0	35,971	0	0	0
102 U of Maine	34,684	3,800	1,470	6,122	137	21,837	250	1,067	1
103 University of Oregon	33,654	1,540	7,305	1,924	3,449	15,249	1,920	2,267	0
104 U Arkansas Medical Sci	33,354	0	0	0	0	33,354	0	0	0
105 SUNY Hlth Sci Ctr Brklyn	31,920i	0i	0i	0i	0i	31,920i	0i	0i	0i
106 US Naval Postgrad School	30,706	7,651i	2,547i	5,068i	7,620i	0i	0i	5,730i	2,090i
107 University of Louisville	29,655	2,107	1,739	22	527	23,571	64	1,625	0
108 Sthrn IL U Carbondale	28,578	4,188	1,763	290	924	15,455	569	1,401	3,988
109 Univ of North Dakota	28,188	20,741	69	530	0	4,643	11	820	1,374
110 U Mississippi, All Camp	26,215	3,650	4,595	0	47	17,174	132	617	0
Total, 1st 110 institutions	14,201,481	2,282,382	1,258,767	993,827	434,467	8,002,196	232,734	725,922	271,186
111 Col of William & Mary	25,183	0	5,105	16,700	808	827	183	1,560	0
112 U TX Arlington	24,010	9,696	2,126	523	8,736	710	41	1,514	664
113 Michigan Tech University	23,882	14,801	1,883	2,183	484	3,938	0	579	14
114 George Mason University	23,230	7,391	2,416	254	2,963	2,043	1,624	6,539	0
115 U MD Biotechnology Inst	22,933	0	0	6,157	0	16,776	0	0	0
116 Florida A&M University	22,474	4,697	2,955	2,608	1,270	10,776	0	168	0
117 CUNY City College	22,166	8,889	8,220	299	831	3,510	348	69	0
118 SUNY Col Env Sci Frstry	21,969	7,182i	1,306i	2,265i	0i	11,079i	0i	137i	0i
119 The University of Alabama	21,806	10,084	3,388	1,936	1,667	1,629	117	2,674	311
120 U of Central Florida	21,488	14,742	5,091	0	401	375	831	48	0
Total, 1st 120 institutions	14,430,622	2,359,864	1,291,257	1,026,752	451,627	8,053,859	235,878	739,210	272,175
121 U MD Center for EES	21,448	0	0	21,448	0	0	0	0	0
122 The University of Montana	21,421	0	548	358	3,038	13,891	28	1,154	2,404
123 U of Missouri Rolla	20,652	14,248	3,302	1,037	1,138	837	8	82	0
124 NM Inst Mining & Tech	20,580	13,890	2,313	3,709	308	354	6	0	0
125 Desert Research Institute	20,100	0	0	13,500	0	3,300	0	3,300	0
126 U WI Milwaukee	19,679	3,591	3,057	3,301	536	2,207	341	5,746	900
127 Colorado School of Mines	19,291	14,406	2,225	548	2,022	0	0	90	0
128 SUNY Binghamton	18,500	5,278	3,044	626	1,294	2,083	3,594	2,581	0
129 The University of Memphis	18,429	3,106	299	3,379	704	2,233	4,353	2,858	1,497
130 Ohio University	18,329	10,174	2,408	96	120	4,827	426	242	36
Total, 1st 130 institutions	14,629,051	2,424,557	1,308,453	1,074,754	460,787	8,083,591	244,634	755,263	277,012
131 Georgia State University	18,114	0	4,431	413	554	3,750	3,812	4,619	535
132 U MA Lowell	17,834	8,452	5,426	24	740	2,033	172	578	409
133 Old Dominion University	17,577	6,267	2,540	5,559	1,301	1,584	48	278	0
134 Wright State University	17,381	2,864	2,256	258	426	10,450	646	27	454
135 U of Nevada Las Vegas	16,893	1,847i	3,047i	5,611i	2,700i	1,982i	49i	1,427i	230i
136 Florida International U	16,856	8,396	1,475	427	1,066	2,145	749	2,598	0
137 NC A&T State University	15,991	9,765	479	0	308	4,575	35	802	27
138 University of Akron	15,507	5,503	7,571	71	659	736	40	927	0
139 CUNY Hunter College	15,021	0	3,626	1,666	360	4,410	1,723	2,218	1,018
140 U PR Med Sci Campus	15,005	0	0	0	0	15,005	0	0	0
Total, 1st 140 institutions	14,795,230	2,467,651	1,339,304	1,088,783	468,901	8,130,261	251,908	768,737	279,685
141 South Dakota State U	14,925	1,111	589	580	24	12,009	0	612	0
142 U of South Alabama	14,873	587	302	325	716	12,028	202	713	0
143 U MD Baltimore County	14,304	3,306	2,584	0	1,789	5,335	734	556	0
144 SUNY Hlth Sci Ctr Syrcse	14,093	0i	0i	0i	0i	14,093i	0i	0i	0i
145 U TX Dallas	13,562	724	6,513	1,888	815	2,170	650	751	51
146 U TX El Paso	13,548	3,651	1,264	3,382	820	1,871	596	1,964	0
147 Western Illinois U	13,517	3,112	2,613	1,470	2,422	2,111	277	1,512	0
148 U of Southwestern LA	13,429	4,460	844	167	3,147	3,189	148	740	734
149 Med Col of Ohio Toledo	13,367	0	0	0	0	13,367	0	0	0
150 U of Missouri Kansas City	12,803	86	684	189	1,316	9,130	485	454	459
Total, 1st 150 institutions	14,933,651	2,484,688	1,354,697	1,096,784	479,950	8,205,564	255,000	776,039	280,929
Total, all other sampled insts	418,550	72,265	70,088	38,080	23,463	133,354	13,589	54,218	13,493
Estimated total non-sampled insts	179,510	14,685	19,041	40,451	13,493	71,169	1,898	12,708	6,065

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-43. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engi-neering	Physical sciences	Environ-mental sciences	Math & computer sciences	Life sciences	Psy-chology	Social sciences	Other sciences
Total, all institutions	8,423,888	1,375,482	951,067	745,183	318,285	4,422,737	183,037	310,438	117,659
1 U of Washington	312,695	17,843	14,935	55,434	7,209	202,810	7,400	7,064	0
2 U CA San Diego	291,917	23,959	35,088	83,625	1,190	143,141	3,367	1,547	0
3 University of Michigan	281,062	65,291	13,688	17,551	4,993	144,865	5,571	25,039	4,064
4 U CA Los Angeles	236,635	21,352	20,674	9,948	9,706	161,934	5,568	6,476	977
5 U WI Madison	233,174	32,616	29,470	16,228	7,659	120,169	11,671	15,356	5
6 U CA San Francisco	221,864	0	0	0	0	221,864	0	0	0
7 University of Minnesota	198,927	21,388	13,231	4,486	13,147	139,154	5,672	1,849	0
8 Pennsylvania State U	190,688	90,452	16,779	13,128	5,646	48,236	4,352	9,831	2,264
9 University of Colorado	177,517	16,142	24,514	32,039	6,798	89,607	4,835	3,578	4
10 U CA Berkeley	168,171	35,130	48,383	3,043	4,563	67,682	4,334	4,320	716
Total, 1st 10 institutions	2,312,650	324,173	216,762	235,482	60,911	1,339,462	52,770	75,060	8,030
11 U of NC Chapel Hill	157,034	0	7,775	6,299	6,375	108,904	3,798	23,883	0
12 University of Arizona	154,004	12,466	52,810	4,837	5,780	72,090	744	4,654	623
13 University of Pittsburgh	149,960	4,965	9,267	128	1,993	125,971	2,909	2,154	2,573
14 Texas A&M University	148,675	32,278	13,688	54,241	2,886	40,087	643	4,602	250
15 U TX Austin	147,808	65,877	37,281	10,274	7,751	15,812	3,255	7,246	312
16 U of Illinois Urbana	144,203	35,736	32,154	6,658	4,811	29,516	4,042	4,281	27,005
17 U CA Davis	130,188	8,187	9,142	3,528	2,035	105,275	1,547	474	0
18 U of Alabama Birmingham	125,804	3,848	908	10	226	119,858	793	161	0
19 Ohio State University	118,811	18,412	13,950	6,641	4,357	61,724	1,961	10,311	1,455
20 Georgia Institute of Tech	116,155	76,917	9,258	6,536	15,807	2,466	1,256	3,104	811
Total, 1st 20 institutions	3,705,292	582,859	402,995	334,634	112,932	2,021,165	73,718	135,930	41,059
21 U of Iowa	105,646	8,885	11,140	230	1,074	81,645	1,580	1,092	0
22 U MD College Park	99,688	33,374	29,390	6,853	10,590	8,899	1,317	9,265	0
23 University of Utah	93,788	12,866	8,812	2,835	10,478	57,785	779	233	0
24 Purdue University	91,632	32,428	13,035	2,840	5,206	33,653	1,522	2,733	215
25 Indiana University	90,881	2,237	20,317	822	3,248	56,549	4,660	3,004	44
26 SUNY Buffalo	87,813	15,074	5,124	416	5,299	52,205	6,417	3,278	0
27 University of Florida	84,973	16,988	7,181	1,134	4,074	52,724	1,444	1,131	297
28 U TX SW Med Ctr Dallas	81,468	0	0	0	0	81,468	0	0	0
29 University of Virginia	80,589	13,683	10,022	3,134	3,445	47,783	2,150	247	125
30 VA Polytech Inst & St U	80,319	22,086	5,232	29,860	2,785	17,614	1,473	1,269	0
Total, 1st 30 institutions	4,602,089	740,480	513,248	382,758	159,131	2,511,490	95,060	158,182	41,740
31 Oregon State University	79,977	11,552	4,562	23,016	949	39,057	27	807	7
32 SUNY Stony Brook	79,570	4,197	15,076	11,468	4,151	41,015	2,039	1,624	0
33 Michigan State University	77,243	5,224	17,951	102	2,697	43,889	1,227	6,132	21
34 University of New Mexico	76,850	23,927	4,507	1,590	3,828	22,345	2,446	2,221	15,986
35 Colorado State University	74,930	7,940	6,502	10,331	1,238	39,003	2,095	2,227	5,594
36 NC State U Raleigh	74,485	27,946	7,124	6,164	3,553	26,979	433	1,250	1,036
37 U of Tennessee System	73,724	11,854	6,874	8,343	7,659	36,635	104	1,701	554
38 U CA Santa Barbara	73,400	32,039	17,661	8,987	5,189	2,335	2,589	4,356	244
39 U CA Irvine	72,994	6,411	16,247	1,788	2,239	42,129	1,896	2,247	37
40 Rutgers the State U NJ	67,588	11,645	9,614	4,946	8,810	22,617	3,502	6,405	49
Total, 1st 40 institutions	5,352,850	883,215	619,366	459,493	199,444	2,827,494	111,418	187,152	65,268
41 U of MD Baltimore	65,211	0	0	0	0	65,211	0	0	0
42 Louisiana St U, All Camp	64,524	12,889	6,057	7,585	719	35,603	171	1,481	19
43 UT-Houston Hlth Sci Ctr	61,456	0	0	0	0	61,456	0	0	0
44 University of IL Chicago	58,991	4,740	3,671	44	2,135	42,757	2,621	2,895	128
45 University of Georgia	56,254	604	3,603	2,888	1,007	43,627	2,206	2,319	0
46 Iowa State University	54,904	19,036	5,640	677	3,256	20,134	125	5,744	292
47 New Mexico State Univ	53,552	36,132	2,606	3,904	2,442	7,455	63	787	163
48 University of Connecticut	53,009	7,253	1,627	3,425	717	35,719	2,670	1,598	0
49 University of Cincinnati	52,561	10,952	1,968	89	311	38,541	52	351	297
50 University of Kentucky	51,450	7,283	2,937	196	1,488	36,567	625	1,190	1,164
Total, 1st 50 institutions	5,924,762	982,104	647,475	478,301	211,519	3,214,564	119,951	203,517	67,331

See explanatory information and SOURCE at end of table

Table B-43. Federally financed R&D expenditures at public universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 Oregon Health Sciences U	51,338	0 i	0 i	0 i	0 i	48,222 i	3,116 i	0 i	0 i
52 U of South Carolina	51,269	12,632	7,748	6,033	4,034	11,586	1,348	4,264	3,624
53 U TX Hlth Sci Ctr San Ant	51,203	0	0	0	0	51,203	0	0	0
54 Washington State U	48,807	5,982	3,738	288	277	23,722	126	5,283	9,391
55 SUNY Albany	48,395	0	1,545	3,324	377	37,400	2,401	3,348	0
56 U Med & Dent NJ	47,505	0	0	0	0	47,505	0	0	0
57 Wayne State University	46,264	2,875	3,479	0	445	37,545	1,155	765	0
58 Virginia Commonwealth U	45,454	71	1,661	0	117	42,904	372	329	0
59 Utah State University	43,764	17,793	4,012	8,880	312	9,548	801	1,627	791
60 U TX MD Anderson Cncr	42,794	0	1,858	0	227	40,709	0	0	0
Total, 1st 60 institutions	6,401,555	1,021,457	671,516	496,826	217,308	3,564,908	129,270	219,133	81,137
61 University of Oklahoma	42,679	4,380	4,516	7,149	669	20,909	1,354	3,702	0
62 University of Kansas	41,858	3,771	4,010	2,275	510	25,069	868	177	5,178
63 Med U of South Carolina	40,637	0	0	0	0	40,637	0	0	0
64 U MA Worcester	40,198	0	0	0	0	40,198	0	0	0
65 Univ of Hawaii Manoa	40,198	1,901	15,211	4,108	1,454	15,155	17	733	1,619
66 Florida State University	39,527	889	19,908	9,084	2,646	5,062	1,346	592	0
67 Arizona State University	38,947	9,826	9,740	6,748	1,678	4,963	3,196	2,183	613
68 U TX Med Br Galveston	38,323	0	0	0	0	38,323	0	0	0
69 U MA Amherst	37,969	5,294	13,024	2,373	7,082	7,890	1,992	314	0
70 U of Rhode Island	36,337 i	3,621 i	904 i	21,544 i	220 i	3,878 i	3,382 i	2,284 i	504 i
Total, 1st 70 institutions	6,798,228	1,051,139	738,829	550,107	231,567	3,766,992	141,425	229,118	89,051
71 Mississippi State U	34,637	13,058	1,567	2,496	646	13,709	0	1,781	1,380
72 U of Missouri Columbia	33,397	2,805	1,631	226	470	23,546	1,546	3,151	22
73 U of Nebraska Lincoln	32,352	3,295	4,271	6,328	576	16,583	512	645	142
74 U CA Santa Cruz	31,727	2,156	12,064	8,231	1,369	6,786	456	664	1
75 University of Vermont	31,521	1,370	662	62	160	27,716	159	0	1,392
76 Auburn University	31,401	12,270	1,920	287	515	10,334	784	344	4,947
77 West Virginia University	30,800	7,986	1,101	5,196	3,842	10,856	0	145	1,674
78 U of Alaska Fairbanks	30,351	608 i	7,518 i	17,114 i	17 i	4,663 i	0 i	431 i	0 i
79 US Naval Postgrad School	29,873	7,439 i	2,377 i	4,866 i	7,527 i	0 i	0 i	5,660 i	2,004 i
80 U of South Florida	29,751	6,612	779	8,212	894	10,704	1,696	854	0
Total, 1st 80 institutions	7,114,038	1,108,738	772,719	603,125	247,583	3,891,889	146,578	242,793	100,613
81 University of Delaware	29,509	9,468	5,996	6,043	3,130	2,224	608	2,040	0
82 Temple University	28,720	112	838	0	144	19,628	3,103	4,855	40
83 Clemson University	28,109	8,636	1,727	404	1,223	13,525	5	2,282	307
84 U CA Riverside	27,727	1,596	4,948	2,425	484	16,940	1,151	183	0
85 University of Oregon	26,411	1,234	5,933	1,565	2,775	12,841	1,281	782	0
86 U of Alabama Huntsville	26,141	8,862	6,694	5,274	2,800	162	0	14	2,335
87 University of Houston	25,448	11,920	4,134	244	2,296	4,304	2,036	487	27
88 Oklahoma State University	25,034	9,277	2,067	134	559	11,812	66	625	494
89 Kansas State University	24,769	4,755	4,804	155	466	13,470	279	530	310
90 Unif Svcs U of Hlth Sci	24,621	0	0	0	0	24,621	0	0	0
Total, 1st 90 institutions	7,380,527	1,164,598	809,860	619,369	261,460	4,011,416	155,107	254,591	104,126
91 Univ of North Dakota	23,976	17,922	52	475	0	4,160	11	674	682
92 U of New Hampshire	23,305	1,312	1,180	15,206	328	3,525	237	1,517	0
93 U of Nevada Reno	20,971	3,632	1,277	3,967	43	10,974	278	451	349
94 NJ Inst of Technology	20,561	11,203	1,221	4,610	1,491	0	0	69	1,967
95 Florida A&M University	20,118	3,887	2,912	2,361	1,270	9,673	0	15	0
96 U PR Mayaguez	19,568	1,280	444	4,424	307	13,081	0	32	0
97 SUNY Hlth Sci Ctr Brklyn	19,072 i	0 i	0 i	0 i	0 i	19,072 i	0 i	0 i	0 i
98 U of Central Florida	18,714	12,596	4,619	0	388	350	759	2	0
99 Montana St U Bozeman	17,667	2,555	4,154	332	264	9,257	0	746	359
100 San Diego St University	17,181	1,546	1,156	1,004	169	9,548	2,676	348	734
Total, 1st 100 institutions	7,581,660	1,220,531	826,875	651,748	265,720	4,091,056	159,068	258,445	108,217
Total, all other sampled insts	754,616	145,163	111,294	75,354	44,389	305,153	22,532	43,683	7,048
Estimated total non-sampled insts	87,612	9,788	12,898	18,081	8,176	26,528	1,437	8,310	2,394

NOTE: Because of rounding, detail may not add to totals.

KEY: ... = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-44. R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions	7,463,752	1,103,169	816,455	302,558	474,270	4,286,563	101,818	260,746	118,173
1 Johns Hopkins Univ	798,468	213,465	118,464	30,178	116,751	290,860	1,031	11,961	15,758
2 MA Institute of Tech	380,612	164,816	97,350	14,361	19,594	36,104	7,213	14,408	26,766
3 Cornell University	339,534	44,724	50,239	3,858	31,360	193,361	4,757	11,235	0
4 Stanford University	324,821	89,231	51,047	9,906	23,869	142,816	2,392	5,560	0
5 U of Pennsylvania	288,430	12,564	24,478	622	8,246	216,836	2,152	23,532	0
6 Harvard University	282,443	4,412	25,245	11,595	2,667	178,308	3,173	45,553	11,490
7 U of Southern California	244,258	36,933	9,288	13,067	38,026	135,848	2,446	6,640	2,010
8 Duke University	242,235	10,666	13,366	2,970	2,928	197,213	4,243	10,849	0
9 Columbia University	236,403	12,866	20,537	37,387	5,440	151,274	2,387	6,512	0
10 Yale University	234,901	6,585	15,853	2,251	3,950	199,028	4,894	2,340	0
Total, 1st 10 institutions	3,372,105	596,262	425,867	126,195	252,831	1,741,648	34,688	138,590	56,024
11 Washington University	218,640	4,914	8,368	3,167	7,086	192,578	849	1,678	0
12 Northwestern University	187,262	28,402	11,844	508	4,730	103,209	1,458	4,821	32,290
13 Baylor Col of Medicine	184,613	0	0	0	0	184,613	0	0	0
14 California Inst of Tech	157,005	29,238	75,331	15,444	10,480	24,137	0	989	1,386
15 Emory University	149,168	0	6,289	0	1,003	136,343	1,529	4,004	0
16 New York University	145,874	0	7,000	470	10,943	116,437	4,773	5,319	932
17 University of Rochester	144,914	31,104	12,803	328	3,342	90,143	6,101	782	311
18 Case Western Reserve U	143,435	25,625	5,451	437	533	106,472	561	4,356	0
19 University of Chicago	137,679	0	27,859	4,790	2,838	98,226	1,685	2,281	0
20 Carnegie Mellon U	136,514	32,827	8,065	2,164	64,794	13,949	5,291	6,163	3,261
Total, 1st 20 institutions	4,977,209	748,372	588,877	153,503	358,580	2,807,755	56,935	168,983	94,204
21 University of Miami	130,056	2,121	1,823	28,375	676	89,080	2,599	5,326	56
22 Vanderbilt University	117,003	8,903	7,908	261	827	93,514	2,453	3,137	0
23 Georgetown University	112,582	0	4,675	808	905	103,154	160	2,791	89
24 Princeton University	112,380	36,447	24,918	8,871	6,706	18,840	5,743	10,855	0
25 Boston University	110,267	8,639	13,156	1,205	2,958	75,059	250	1,408	7,592
26 The Rockefeller Univ	105,595	0	6,478	0	487	98,630	0	0	0
27 CUNY Mt Sinai Sch Med	92,405	0	0	0	0	92,405	0	0	0
28 Yeshiva University	91,430	0	0	0	0	91,430	0	0	0
29 Tulane University	83,660	6,952	3,132	184	661	68,169	517	284	3,761
30 Tufts University	79,356	4,105	6,343	9	847	62,376	1,918	3,758	0
Total, 1st 30 institutions	6,011,943	815,539	657,310	193,216	372,647	3,600,412	70,575	196,542	105,702
31 Wake Forest University	75,331	0	1,484	0	224	73,003	0	620	0
32 Woods Hole Oceanograph	73,015	14,313	0	58,702	0	0	0	0	0
33 Thomas Jefferson U	69,154	0	0	0	0	69,154	0	0	0
34 Brown University	67,621	10,249	8,791	5,341	10,529	26,204	2,140	4,367	0
35 Dartmouth College	52,945	5,172	3,288	926	960	40,927	607	254	811
36 George Washington U	49,263	8,658	1,905	37	7,205	24,344	456	6,346	312
37 Allegheny U of Hlth Sci	48,790	0	0	0	0	48,790	0	0	0
38 Rush University	48,772	0	0	0	0	45,056	3,716	0	0
39 Medical Col of Wisconsin	47,365	0	0	0	0	47,365	0	0	0
40 University of Dayton	43,188	37,150	4,094	448	156	785	81	3	471
Total, 1st 40 institutions	6,587,387	891,081	676,872	258,670	391,721	3,976,040	77,575	208,132	107,296
41 Loyola U of Chicago	42,565	0	528	0	771	37,637	1,019	2,092	518
42 Rice University	39,696	5,130	8,696	8,016	12,543	4,918	214	179	0
43 Rensselaer Polytech Inst	37,917	26,694	5,365	1,345	2,701	789	253	137	633
44 Brandeis University	36,760	0	3,785	0	1,322	17,513	1,212	12,928	0
45 Lehigh University	34,780	27,915	4,101	1,168	450	913	117	116	0
46 Clark Atlanta University	34,566	5,714	6,000	9,020	4,365	8,585	0	882	0
47 Syracuse University	34,322	9,328	5,231	959	10,201	3,873	960	2,368	1,402
48 Howard University	28,894	3,930	5,276	2	6,028	9,195	1,389	2,229	845
49 Saint Louis University	25,099	13	2	1,023	27	23,950	43	7	34
50 University of Notre Dame	24,556	7,327	11,532	0	1,227	3,986	399	85	0
Total, 1st 50 institutions	6,926,542	977,132	727,388	280,203	431,356	4,087,399	83,181	229,155	110,728

See explanatory information and SOURCE at end of table.

Table B-44. R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
51 Oregon Grad Inst Sci Tech	21,412	2,948	6,528	3,388	8,548	0	0	0	0
52 Drexel University	19,322	12,650	1,322	1,029	1,375	621	0	2,325	0
53 Northeastern University	17,980	7,617	3,717	0	1,684	3,313	847	802	0
54 Eastern VA Med School	17,730	0	0	0	0	17,730	0	0	0
55 C R Drew U of Med & Sci	16,386	0	0	0	0	16,386	0	0	0
56 New York Medical College	16,372	0	0	0	0	16,372	0	0	0
57 Illinois Inst of Tech	16,000	4,725	6,378	0	1,816	3,037	24	20	0
58 Stevens Inst of Tech	15,249	12,449	842	0	74	0	0	1,884	0
59 Boston College	14,504	0	4,323	725	6,712	1,772	236	736	0
60 Brigham Young University	14,387e	7,691e	2,131e	155e	521e	2,468e	214e	1,207e	0e
Total, 1st 60 institutions	7,095,884	1,025,212	752,629	285,500	452,086	4,149,098	84,502	236,129	110,728
61 Mercer University	13,641	10,451	781	0	37	2,370	0	2	0
62 Morehouse School of Med	13,206	0	0	0	0	12,455	0	0	751
63 Creighton University	11,641	0	152	43	0	11,446	0	0	0
64 Meharry Medical College	11,212	0	0	673	0	10,539	0	0	0
65 Polytechnic University	10,964	5,229	2,252	0	3,483	0	0	0	0
66 Loma Linda University	10,837	0	0	0	0	9,724	0	1,113	0
67 Inst Paper Sci and Tech	9,939i	5,209i	3,816i	0i	0i	914i	0i	0i	0i
68 University of Tulsa	9,565	7,104	719	523	428	755	5	31	0
69 Worcester Polytech Inst	9,407	7,468	253	0	610	1,012	0	64	0
70 Tuskegee University	9,061	1,085	468	0	0	7,420	0	88	0
Total, 1st 70 institutions	7,205,357	1,061,758	761,070	286,739	456,644	4,205,733	84,507	237,427	111,479
71 Southern Methodist U	9,050	1,395	1,314	2,682	1,449	1,113	162	378	557
72 University of Denver	8,728	2,600	3,236	0	5	634	1,385	868	0
73 Clarkson University	8,264	5,789	1,976	0	394	69	36	0	0
74 Rochester Inst of Tech	8,118	1,523	2,475	1,390	0	2,560	0	0	170
75 Florida Inst of Tech	8,013	2,609	1,110	1,315	724	1,398	857	0	0
76 Albany Medical College	7,888	0	0	0	0	7,888	0	0	0
77 Catholic U of America	7,427	1,516	4,141	0	0	690	639	441	0
78 Finch U Hlth Sci Chicago	7,022	0	0	0	0	6,686	336	0	0
79 Marquette University	5,946	2,862i	510i	0i	214i	2,044i	0i	316i	0i
80 Wesleyan University	5,245	0	2,371	321	122	1,673	527	231	0
Total, 1st 80 institutions	7,281,058	1,080,052	778,203	292,447	459,552	4,230,488	88,449	239,661	112,206
81 Xavier University of LA	5,188	0	623	0	0	1,394	0	0	3,171
82 Wellesley College	4,944	0i	974i	0i	226i	2,700i	0i	1,044i	0i
83 New Sch for Soci Res	4,718i	0i	0i	0i	0i	193i	473i	4,047i	0i
84 Ponce School of Medicine	4,450	0	0	0	0	4,450	0	0	0
85 Alfred University	4,217	4,217	0	0	0	0	0	0	0
86 Hampton University	3,854	951	1,715	150	938	100	0	0	0
87 Morris Brown College	3,652	1,074	2	0	1,053	524	0	250	749
88 Bryn Mawr College	3,432	0	564	163	139	218	459	1,889	0
89 American University	3,279	0	910	0	61	935	84	1,289	0
90 Texas Christian U	2,787	44	630	50	29	75	1,948	11	0
Total, 1st 90 institutions	7,321,579	1,086,338	783,621	292,810	461,998	4,241,082	91,413	248,191	116,126
91 Institute of Textile Tech	2,781	1,829	583	0	369	0	0	0	0
92 Fordham University	2,712	0	111	30	93	1,687	132	659	0
93 U Ctrl Del Caribe Esc Med	2,626	0	0	0	0	2,608	0	18	0
94 U of Detroit Mercy	2,555	259	1,107	781	0	24	0	29	355
95 Seton Hall University	2,400e	0i	716i	0i	0i	1,684i	0i	0i	0i
96 Hofstra University	2,290	1,612	0	0	518	160	0	0	0
97 Smith College	2,066i	0i	377i	82i	225i	907i	147i	328i	0i
98 Villanova University	2,040	970	460	0	60	310	200	40	0
99 Hampshire College	1,978i	627i	301i	91i	346i	48i	5i	528i	32i
100 Fisk University	1,969	0	1,651	0	224	94	0	0	0
Total, 1st 100 institutions	7,344,996	1,091,635	788,927	293,794	463,833	4,248,604	91,897	249,793	116,513
Total, all other sampled insts.	51,196	4,216	9,523	3,870	3,508	17,896	6,575	4,214	1,394
Estimated total non-sampled insts.	67,560	7,318	18,005	4,894	6,929	20,063	3,346	6,739	266

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-45. Federally financed R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions	5,386,176	840,873	688,323	248,586	399,738	2,966,198	71,002	116,743	54,712
1 Johns Hopkins Univ	710,119	209,128	115,030	29,088	115,758	228,357	1,004	8,301	3,453
2 Stanford University	281,641	80,295	49,801	8,042	21,183	119,501	2,030	789	0
3 MA Institute of Tech	271,544	112,703	84,821	10,993	13,513	29,882	3,800	2,941	12,891
4 U of Pennsylvania	216,167	9,514	22,397	98	7,577	164,593	1,920	10,068	0
5 Cornell University	203,082	29,517	40,847	2,366	25,430	99,877	2,252	2,793	0
6 Harvard University	203,047	2,234	23,200	8,452	2,281	129,710	2,602	25,660	8,908
7 Columbia University	195,652	7,663	17,757	34,634	4,564	124,483	2,222	4,329	0
8 U of Southern California	179,281	30,032	7,608	10,695	36,386	88,447	2,122	3,200	791
9 Yale University	176,994	4,981	14,097	1,836	3,218	149,625	2,388	849	0
10 Washington University	155,197	3,162	6,272	2,666	5,842	135,203	700	1,352	0
Total, 1st 10 institutions	2,592,724	489,229	381,830	108,870	235,752	1,269,678	21,040	60,282	26,043
11 Duke University	149,631	7,015	11,461	2,057	2,182	115,906	3,296	7,714	0
12 California Inst of Tech	142,474	26,507	70,337	14,065	10,032	20,351	0	847	335
13 University of Chicago	114,123	0	25,134	3,999	2,646	80,687	1,347	310	0
14 University of Rochester	112,933	27,679	12,030	268	3,238	65,869	3,230	619	0
15 Case Western Reserve U	109,901	16,825	4,080	306	230	86,625	441	1,394	0
16 Northwestern University	100,810	17,925	8,677	339	4,055	56,999	1,196	2,260	9,359
17 University of Miami	96,716	1,439	1,652	23,795	498	61,623	2,499	5,184	26
18 Vanderbilt University	95,684	6,586	6,985	251	665	77,157	1,994	2,046	0
19 Emory University	95,237	0	4,468	0	766	88,425	1,245	333	0
20 Baylor Col of Medicine	92,294	0	0	0	0	92,294	0	0	0
Total, 1st 20 institutions	3,702,527	593,205	526,654	153,950	260,064	2,015,614	36,288	80,989	35,763
21 Carnegie Mellon U	91,830	19,500	6,133	393	50,814	6,613	3,780	3,113	1,484
22 New York University	90,010	0	3,544	117	8,472	72,872	4,112	806	87
23 Boston University	87,947	6,508	9,904	833	2,794	59,631	157	923	7,197
24 Georgetown University	81,704	0	3,828	435	98	75,805	138	1,383	17
25 Yeshiva University	73,396	0	0	0	0	73,396	0	0	0
26 Princeton University	69,386	22,847	18,380	5,696	3,738	11,985	4,518	2,222	0
27 Woods Hole Oceanograph	61,820	11,486	0	50,334	0	0	0	0	0
28 CUNY Mt Sinai Sch Med	61,599	0	0	0	0	61,599	0	0	0
29 Wake Forest University	55,845	0	1,084	0	159	54,124	0	478	0
30 Tufts University	53,508	2,536	4,814	0	650	43,697	1,192	619	0
Total, 1st 30 institutions	4,429,572	656,082	574,341	211,758	326,789	2,475,336	50,185	90,533	44,548
31 Thomas Jefferson U	51,475	0	0	0	0	51,475	0	0	0
32 Tulane University	49,720	4,127	2,016	30	513	40,152	373	204	2,305
33 Brown University	42,139	7,150	5,362	3,869	6,868	16,920	1,403	567	0
34 Dartmouth College	39,682	3,915	2,861	561	878	30,703	579	185	0
35 The Rockefeller Univ	37,369	0	3,486	0	148	33,735	0	0	0
36 Medical Col of Wisconsin	34,527	0	0	0	0	34,527	0	0	0
37 University of Dayton	34,413	30,375	3,020	443	105	390	80	0	0
38 Rice University	33,238	2,872	7,451	7,127	11,736	3,664	214	174	0
39 George Washington U	30,490	6,816	1,384	18	6,529	12,226	398	2,918	201
40 Loyola U of Chicago	27,931	0	355	0	568	25,510	594	904	0
Total, 1st 40 institutions	4,810,556	711,337	600,276	223,806	354,134	2,724,638	53,826	95,485	47,054
41 Allegheny U of Hlth Sci	27,723	0	0	0	0	27,723	0	0	0
42 Howard University	26,253	3,613	5,007	2	5,626	7,762	1,269	2,146	828
43 Clark Atlanta University	25,345	4,511	4,789	6,072	2,802	6,628	0	543	0
44 Rensselaer Polytech Inst	24,748	17,267	3,576	899	1,793	528	169	92	424
45 Brandeis University	23,233	0	2,966	0	1,096	12,497	1,003	5,671	0
46 Rush University	22,480	0	0	0	0	21,876	604	0	0
47 Lehigh University	22,409	17,526	2,834	1,054	228	712	54	1	0
48 Saint Louis University	21,483	13	0	1,017	27	20,380	43	3	0
49 University of Notre Dame	18,886	5,084	9,944	0	901	2,631	294	32	0
50 Syracuse University	18,361	5,387	3,745	420	3,527	2,845	442	1,254	741
Total, 1st 50 institutions	5,041,477	764,738	633,137	233,270	370,134	2,828,220	57,704	105,227	49,047

See explanatory information and SOURCE at end of table.

Table B-45. Federally financed R&D expenditures at private universities and colleges, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engi-neering	Physical sciences	Environ-mental sciences	Math & computer sciences	Life sciences	Psy-chology	Social sciences	Other sciences
51 C R Drew U of Med & Sci	15,288	0	0	0	0	15,288	0	0	0
52 Northeastern University	14,706	6,252	3,401	0	1,299	2,599	815	340	0
53 Morehouse School of Med	11,747	0	0	0	0	11,084	0	0	663
54 New York Medical College	11,657	0	0	0	0	11,657	0	0	0
55 Drexel University	11,613	8,685	1,151	668	311	421	0	377	0
56 Oregon Grad Inst Sci Tech	11,215	891	3,479	1,429	5,416	0	0	0	0
57 Illinois Inst of Tech	11,183	3,289	3,359	0	1,745	2,790	0	0	0
58 Boston College	11,137	0	3,147	601	5,780	1,176	181	252	0
59 Meharry Medical College	11,004	0	0	673	0	10,331	0	0	0
60 Mercer University	10,832	9,939	310	0	0	583	0	0	0
Total, 1st 60 institutions	5,161,859	793,794	647,984	236,641	384,685	2,884,149	58,700	106,196	49,710
61 Eastern VA Med School	10,203	0	0	0	0	10,203	0	0	0
62 Stevens Inst of Tech	9,222	7,319	669	0	40	0	0	1,194	0
63 Brigham Young University	8,752	4,883i	1,140i	112i	257i	1,465i	85i	810i	0i
64 Tuskegee University	8,231	1,033	364	0	0	6,752	0	82	0
65 University of Denver	7,770	2,285	2,760	0	5	581	1,304	835	0
66 Worcester Polytech Inst	6,967	5,678	209	0	400	637	0	43	0
67 Albany Medical College	6,691	0	0	0	0	6,691	0	0	0
68 Polytechnic University	6,329	3,379	950	0	2,000	0	0	0	0
69 Southern Methodist U	6,007	621	688	2,489	998	903	138	170	0
70 Catholic U of America	5,901	1,475	3,250	0	0	488	592	96	0
Total, 1st 70 institutions	5,237,932	820,467	658,014	239,242	388,385	2,911,869	60,819	109,426	49,710
71 Loma Linda University	5,878	0	0	0	0	4,863	0	1,015	0
72 Finch U Hlth Sci Chicago	5,209	0	0	0	0	4,921	288	0	0
73 Xavier University of LA	5,106	0	623	0	0	1,394	0	0	3,089
74 University of Tulsa	5,104	3,836	334	275	209	424	0	26	0
75 Creighton University	5,046	0	147	43	0	4,856	0	0	0
76 Ponce School of Medicine	4,212	0	0	0	0	4,212	0	0	0
77 Wesleyan University	3,889	0	1,896	192	80	1,116	456	149	0
78 Hampton University	3,854	951	1,715	150	938	100	0	0	0
79 Clarkson University	3,794	2,558	808	0	348	49	31	0	0
80 Florida Inst of Tech	2,980	1,095	515	291	211	868	0	0	0
Total, 1st 80 institutions	5,283,004	828,907	664,052	240,193	390,171	2,934,672	61,594	110,616	52,799
81 American University	2,864	0	848	0	61	931	65	959	0
82 Rochester Inst of Tech	2,545	550	536	507	0	944	0	0	8
83 Wellesley College	2,533	0i	501i	0i	114i	1,414i	0i	504i	0i
84 Morris Brown College	2,422	663	0	0	236	524	0	250	749
85 Inst Paper Sci and Tech	2,397i	812i	1,585i	0i	0i	0i	0i	0i	0i
86 U Ctrl Del Caribe Esc Med	2,353	0	0	0	0	2,353	0	0	0
87 Hofstra University	2,290	1,612	0	0	518	160	0	0	0
88 Marquette University	2,270	526i	353i	0i	114i	1,247i	0i	30i	0i
89 Texas Christian U	2,159	17	160	47	28	39	1,868	0	0
90 Fisk University	1,969	0	1,651	0	224	94	0	0	0
Total, 1st 90 institutions	5,306,806	833,087	669,686	240,747	391,466	2,942,378	63,527	112,359	53,556
91 Clark University	1,756	0	775	643	59	100	127	52	0
92 Fordham University	1,421	0	57	30	23	765	0	546	0
93 Villanova University	1,390	560	380	0	60	200	190	0	0
94 College of the Holy Cross	1,245	0	882	0	71	117	175	0	0
95 Seton Hall University	1,243i	0i	370i	0i	0i	873i	0i	0i	0i
96 St John's University (NY)	1,227	0	0	0	3	1,086	121	17	0
97 Johnson C Smith U	1,083	150	0	66	310	557	0	0	0
98 Bryn Mawr College	1,039	0	184	96	11	111	290	347	0
99 Wentworth Inst of Tech	1,023	10	0	1,013	0	0	0	0	0
100 Spelman College	988	0	559	0	74	355	0	0	0
Total, 1st 100 institutions	5,319,221	833,807	672,893	242,595	392,077	2,946,542	64,430	113,321	53,556
Total, all other sampled insts.	26,239	2,987	4,483	1,842	2,201	8,540	3,798	1,255	1,133
Estimated total non-sampled insts.	40,716	4,079	10,947	4,149	5,460	11,116	2,774	2,167	23

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-46. Total and federally financed R&D expenditures at historically black colleges and universities: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	263,551	241,367	211,439	191,369	222,592	199,380	174,561	157,207
1 Clark Atlanta University	34,566	25,245	12,709	12,057	25,345	15,821	11,025	10,484
2 Howard University	28,894	24,819	19,836	18,427	26,253	21,137	15,196	14,819
3 Florida A&M University	22,474	20,797	24,691	22,777	20,118	19,430	20,730	18,954
4 NC A&T State University	15,991	15,774	13,637	12,090	12,521	12,501	10,132	8,759
5 Morehouse School of Med	13,206	7,896	7,522	7,448	11,747	6,996	6,663	6,597
6 Meharry Medical College	11,212	10,738	10,336	9,283	11,004	10,208	10,154	9,074
7 Southern U A&M All Camp	10,748	9,639	6,512	6,837	7,724	7,480	4,620	4,828
8 Prairie View A&M U	10,621	8,019	8,306	5,931	10,325	6,284	5,693	4,885
9 Alabama A&M University	9,765i	9,417	11,098	9,316	8,382i	8,075	8,954	7,295
10 Tennessee State U	9,137	7,431	6,916	5,252	7,983	6,478	6,031	5,245
Total, 1st 10 institutions	166,614	139,775	121,563	109,418	141,402	114,410	99,198	90,940
11 Tuskegee University	9,061	7,446	7,121	5,500	8,231	7,200	6,694	5,154
12 Jackson State University	5,224	4,960i	4,697	4,371	4,702	4,461i	4,220	3,831
13 Xavier University of LA	5,188	10,048	4,176	3,169	5,106	8,979	4,176	3,145
14 U of the Virgin Islands	4,828	3,811i	2,794	6,189	2,428	2,040i	1,653	2,283
15 Hampton University	3,854	6,344	5,342	4,597	3,854	6,130	5,078	4,597
16 Morgan State University	3,852i	3,700i	3,558	1,496	3,813i	3,594i	3,423	1,456
17 Texas Southern U	3,820	4,173	2,612	4,220	3,474	3,474	2,353	3,652
18 Albany State University	3,687e	3,687i	3,687e	3,733	675e	675i	675	1,068
19 Morris Brown College	3,652	3,796	1,010	1,227	2,422	3,796	927	1,227
20 U Arkansas Pine Bluff	3,424	4,780	3,446	3,247	2,747	3,661	2,341	2,164
Total, 1st 20 institutions	213,204	192,520	160,006	147,167	178,854	158,420	130,738	119,517
21 Alcorn State University	3,368	3,233i	3,099	3,129	3,365	3,202i	3,039	3,038
22 Virginia State University	3,270	3,134	4,569	4,801	2,735	2,599	4,529	4,761
23 University of DC	3,244	3,227i	3,211	3,055i	1,756	1,784i	1,811e	1,705i
24 South Carolina State U	3,000	4,091i	5,181	4,103	1,910	2,325i	2,739	2,460
25 Lincoln University	2,970	2,934	3,121	2,958	2,681	2,702	2,869	2,726
26 Kentucky State University	2,773	2,920	2,665	2,349	2,761	2,920	2,665	2,349
27 Langston University	2,521	3,187	2,046	1,881	2,521	2,661	1,929	1,570
28 Fort Valley State U	2,474	3,009	2,648	2,749	2,338	2,936	2,591	2,413
29 Norfolk State University	2,239	1,273	671	566	2,187	1,256	671	566
30 Delaware State University	2,071	1,036	3,987	1,262	1,787	999	3,686	1,262
Total, 1st 30 institutions	241,134	220,564	191,204	174,020	202,895	181,804	157,267	142,367
31 U MD Eastern Shore	1,980	1,880	1,128	3,045	1,980	1,880	1,128	2,691
32 Fisk University	1,969	1,800i	1,631	1,502	1,969	1,741i	1,514	1,418
33 Central State University	1,786	1,789i	1,791	1,889	1,180i	1,180i	1,180	1,272
34 Tougaloo College	1,502i	1,502i	1,502	1,415	745i	745i	745	636
35 Grambling State U	1,455	204	209	210	1,450	145	155	155
36 Winston Salem State U	1,406	1,123	940	529	1,246	797	780	529
37 Johnson C Smith U	1,307	1,307	2,083	377	1,083	1,083	1,803	377
38 Lincoln University (PA)	1,135	818i	502	505	1,135	818i	502	432
39 Elizabeth City State U	1,098	758i	418	1,050	753	497i	241	605
40 Spelman College	1,084	1,435	1,089	603	988	1,277	954	569
Total, 1st 40 institutions	255,856	233,180	202,497	185,145	215,424	191,967	166,269	151,051
41 Alabama State University	1,000	1,000	1,055	534	970	970	1,026	528
42 North Carolina Central U	869i	835	409	335	863i	813	409	313
43 Claflin College	764	540	103	180	474	290	103	180
44 Benedict College	634	850	1,062	600	552i	740i	925	600
45 Morehouse College	592	1,074	992	1,119	591	793	730	1,117
46 Mississippi Valley St U	586	471	319	213	586	471	319	213
47 Fayetteville State U	503	470i	437	273	503i	470i	437	273
48 Bethune Cookman College	451	0	507	221	333	0	358	218
49 Oakwood College	371	300	161	186	371	300	161	186
50 Wilberforce University	323	384	505	200	323	384	505	200
Total, 1st 50 institutions	261,949	239,104	208,047	189,006	220,990	197,198	171,242	154,879

See explanatory information and SOURCE at end of table.

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Table B-46. Total and federally financed R&D expenditures at historically black colleges and universities: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 Savannah State Univ	317	214	128	173	317	214	128	168
52 Dillard University	314	145	110	0	314	145	110	0
53 Selma University	250	495i	740	420	250	495i	740	420
54 Knoxville College	163	124i	85	23e	163i	124i	85	23i
55 Coppin State College	116	208	218	77	116	208	218	77
56 Shaw University	115	56	56	53	115	56	56	53
57 Jarvis Christian College	102	219	219	336	102	219	219	336
58 Bennett College	93	112	112	123	93i	111	105	122
59 Philander Smith College	73	145	157	157	73	145	137	157
60 Bowie State University	49	173	937	465	49	93	937	465
Total, 1st 60 institutions	263,541	240,995	210,809	190,833	222,582	199,008	173,977	156,700
61 West Virginia State Col	10	40	241	190	10	40	195	161
62 Rust College	0	332	389	346	0	332	389	346
63 Talladega College	0	0	0	0	0	0	0	0
64 Trenholm State Tech Col	0	0	0	0	0	0	0	0
65 Voorhees College	0	0	0	0	0	0	0	0
Total, 1st 65 institutions	263,551	241,367	211,439	191,369	222,592	199,380	174,561	157,207

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-47. Total and federally financed R&D expenditures in engineering at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	3,674,806	3,500,455	3,340,864	3,155,878	2,216,355	2,098,150	1,990,314	1,857,930
1 Johns Hopkins Univ	213,465	209,366	210,522	203,064	209,128	206,060	207,014	198,765
2 MA Institute of Tech	164,816	160,611	158,530	160,174	112,703	113,927	109,258	107,423
3 Georgia Institute of Tech	149,412	140,523	125,004	115,523	76,917	69,569	62,671	64,634
4 Pennsylvania State U	138,718	136,995	129,313	118,454	90,452	89,864	85,836	79,610
5 University of Michigan	108,668	92,186	88,837	74,735	65,291	58,002	54,368	44,668
6 U TX Austin	101,222	93,454	106,743	99,240	65,877	61,159	61,596	55,324
7 Texas A&M University	97,848	83,880	82,565	77,413	32,278	23,695	22,788	19,249
8 Stanford University	89,231	89,844	92,946	90,770	80,295	80,298	81,762	78,061
9 U CA Berkeley	69,000	64,715	61,654	62,019	35,130	32,525	33,108	31,539
10 U MD College Park	65,537	60,953	47,556	48,698	33,374	30,634	22,912	21,463
Total, 1st 10 institutions	1,197,917	1,132,527	1,103,670	1,050,090	801,445	765,733	741,313	700,736
11 Purdue University	62,490	58,841	47,809	40,454	32,428	31,002	26,369	23,700
12 U of Illinois Urbana	61,712	54,562	51,634	53,304	35,736	33,573	30,946	30,388
13 NC State U Raleigh	61,709	60,013	58,871	48,244	27,946	26,051	26,734	21,715
14 Ohio State University	61,403	56,916	51,162	44,967	18,412	18,951	17,182	15,251
15 U WI Madison	53,094	54,148	55,021	49,723	32,616	33,804	34,375	31,278
16 Cornell University	44,724	41,879	41,416	43,369	29,517	26,905	27,730	28,923
17 New Mexico State Univ	42,742	44,808	43,255	45,450	36,132	37,043	36,840	38,316
18 Iowa State University	42,150	46,554	44,152	35,955	19,036	20,559	20,444	15,469
19 VA Polytech Inst & St U	39,562	39,756	43,623	45,671	22,086	20,354	21,304	23,698
20 U CA Santa Barbara	37,759	31,935	28,477	23,798	32,039	27,030	24,538	19,349
Total, 1st 20 institutions	1,705,262	1,621,939	1,569,090	1,481,025	1,087,393	1,041,005	1,007,775	948,823
21 University of Dayton	37,150	42,103	43,659	40,390	30,375	35,217	37,269	34,658
22 U of Southern California	36,933	32,647	26,861	27,576	30,032	26,625	21,438	22,262
23 Princeton University	36,447	30,996	24,454	24,791	22,847	19,173	13,833	12,834
24 University of New Mexico	36,001	34,714	39,716	30,509	23,927	24,090	23,432	17,595
25 Louisiana St U, All Camp	34,767	29,619	22,781	24,145	12,889	9,809	4,957	6,548
26 University of Connecticut	34,200	32,582	29,561	24,452	7,253	6,209	4,381	3,348
27 University of Minnesota	34,080	32,423	30,625	28,856	21,388	20,618	18,885	15,735
28 Carnegie Mellon U	32,827	30,245	28,153	26,178	19,500	17,493	17,088	14,920
29 U of Washington	31,787	31,913	23,332	18,451	17,843	16,805	11,149	10,043
30 U CA San Diego	31,373	25,754	15,806	13,738	23,959	19,417	11,561	10,920
Total, 1st 30 institutions	2,050,827	1,944,935	1,854,038	1,740,111	1,297,406	1,236,461	1,171,768	1,097,686
31 University of Rochester	31,104	40,136	55,780	46,716	27,679	36,001	51,993	42,751
32 University of Colorado	30,788	30,082	26,666	22,942	16,142	15,037	14,781	13,650
33 University of Florida	30,446	27,260	28,086	28,912	16,988	14,586	14,070	12,802
34 California Inst of Tech	29,238	24,135	23,093	20,384	26,507	21,789	20,799	18,084
35 U CA Los Angeles	28,509	30,813	29,544	27,799	21,352	23,341	22,473	20,057
36 Northwestern University	28,402	23,729	21,630	21,017	17,925	14,785	13,578	13,836
37 Arizona State University	28,147	25,788	19,555	21,893	9,826	7,399	6,637	6,584
38 Lehigh University	27,915	27,234	21,795	23,087	17,526	16,392	10,999	12,109
39 U of Tennessee System	27,444	26,543	29,887	30,248	11,854	12,152	14,379	15,796
40 Rensselaer Polytech Inst	26,694	25,584	26,012	31,787	17,267	16,512	15,390	15,924
Total, 1st 40 institutions	2,339,514	2,226,239	2,136,086	2,014,896	1,480,472	1,414,455	1,356,867	1,269,279
41 Clemson University	26,066	25,497	24,055	24,798	8,636	8,839	7,581	7,354
42 Case Western Reserve U	25,625	23,779	24,859	24,957	16,825	15,191	15,489	16,223
43 University of Houston	25,212	22,885	21,961	23,058	11,920	9,647	9,832	11,629
44 Rutgers the State U NJ	24,686	26,991	25,389	18,932	11,645	12,182	13,601	6,365
45 Utah State University	24,219	28,922	25,448	24,093	17,793	24,106	21,917	20,185
46 SUNY Buffalo	23,367	23,703	23,271	23,732	15,074	9,384	6,530	9,223
47 University of Virginia	21,097	22,155	21,542	19,700	13,683	14,468	14,337	12,607
48 University of Arizona	20,896	21,270	20,659	20,093	12,466	12,440	10,734	9,223
49 Univ of North Dakota	20,741	10,709	10,433	10,768	17,922	9,037	9,569	9,371
50 U of Iowa	19,965	19,198	17,841	15,181	8,885	9,890	10,074	7,073
Total, 1st 50 institutions	2,571,388	2,451,348	2,351,544	2,220,208	1,615,321	1,539,639	1,476,531	1,378,532

See explanatory information and SOURCE at end of table

Table B-47. Total and federally financed R&D expenditures in engineering at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 University of Kentucky	19,565	18,170	16,900	16,729	7,283	6,383	6,047	6,607
52 Oklahoma State University	19,411	15,788	19,753	16,433	9,277	6,324	8,773	8,713
53 Auburn University	18,579	13,885	13,282	19,690	12,270	8,049	7,855	7,310
54 University of Utah	18,482	15,282	15,636	16,679	12,866	9,937	10,632	10,830
55 U of South Carolina	18,469	23,421	13,459	9,314	12,632	13,866	6,665	4,370
56 Mississippi State U	18,056	17,824	17,936	15,993	13,058	12,773	12,470	11,256
57 NJ Inst of Technology	17,937	13,359	11,144	7,429	11,203	7,455	5,585	3,097
58 University of Cincinnati	17,898	18,431	19,430	19,746	10,952	10,951	11,264	11,822
59 Colorado State University	17,406	17,364	16,437	16,137	7,940	8,072	7,157	8,800
60 University of Delaware	17,369	14,916	14,668	16,231	9,468	7,416	6,926	8,472
Total, 1st 60 institutions	2,754,560	2,619,788	2,510,189	2,374,589	1,722,270	1,630,865	1,559,905	1,459,809
61 U CA Davis	17,349	16,143	14,709	15,487	8,187	7,206	6,069	7,728
62 Oregon State University	17,305	12,834	12,107	9,801	11,552	7,209	4,983	3,634
63 U of South Florida	16,501	13,139	11,697	10,726	6,612	5,271	4,057	2,987
64 Michigan State University	16,403	17,278	19,702	15,988	5,224	6,007	7,212	7,095
65 University of Oklahoma	15,564	16,064	14,059	14,512	4,380	3,646	4,340	4,556
66 U of Nebraska Lincoln	15,424	18,169	14,565	11,263	3,295	4,838	3,878	1,603
67 Michigan Tech University	14,801	14,752	14,714	11,940i	8,140	7,611	6,407	5,422i
68 U of Central Florida	14,742	23,058	21,439	5,908	12,596	13,510	11,524	2,232
69 Colorado School of Mines	14,406	12,723i	11,035	10,588	7,028	6,665i	6,298	5,095
70 Woods Hole Oceanograph	14,313	17,543	17,371	16,999	11,486	15,764i	16,081	15,848
Total, 1st 70 institutions	2,911,368	2,781,491	2,661,587	2,497,801	1,800,770	1,708,592	1,630,754	1,516,009
71 U of Missouri Rolla	14,248	15,719	14,015	13,706	3,852	4,045	4,753	4,438
72 U of Alabama Huntsville	14,156	11,530	9,936	15,097	8,862	7,410	6,861	10,578
73 NM Inst Mining & Tech	13,890	12,905	14,617	16,757	4,513	5,647	5,445	3,191
74 U of Missouri Columbia	13,324	11,145	12,381	12,362	2,805	2,757	3,063	2,751
75 U CA Irvine	13,048	11,445	9,754	8,655	6,411	6,049	4,478	3,662
76 West Virginia University	13,042	12,441	13,108	11,184	7,986	7,615	8,537	7,146
77 Columbia University	12,866	13,481	14,407	14,743	7,663	10,314	12,036	12,251
78 Drexel University	12,650	11,905	12,143	13,027	8,685	6,849	6,828	7,706
79 U of Pennsylvania	12,564	12,737	11,918	14,934	9,514	9,016	7,739	10,471
80 Stevens Inst of Tech	12,449	11,935	11,592	13,367	7,319	7,634	6,623	9,978
Total, 1st 80 institutions	3,043,605	2,906,734	2,785,458	2,631,633	1,868,380	1,775,928	1,697,117	1,588,181
81 Kansas State University	11,376	12,451	9,355	9,091	4,755	5,798	3,067	2,382
82 U MA Amherst	10,685	10,193	9,962	9,629	5,294	5,277	4,811	4,760
83 Duke University	10,666	8,339	7,640	8,515	7,015	5,618	5,683	6,209
84 Washington State U	10,576	9,760	9,185	8,762	5,982	5,853	5,575	4,391
85 University of IL Chicago	10,546	10,080	8,364	8,056	4,740	4,316	3,452	2,596
86 Mercer University	10,451	8,913	12,411	11,784	9,939	8,381	10,434	9,579
87 Texas Tech University	10,294	9,758	9,513	9,927	3,223	2,230	2,325	2,341
88 Brown University	10,249	8,175	8,550	9,073	7,150	5,573	6,288	6,532
89 Ohio University	10,174	9,777	8,606	8,767	4,827	3,738	3,011	3,052
90 The University of Alabama	10,084	9,291	8,932	7,422	6,356	4,939	5,214	3,508
Total, 1st 90 institutions	3,148,706	3,003,471	2,877,976	2,722,659	1,927,661	1,827,651	1,746,977	1,633,531
91 NC A&T State University	9,765	9,269	7,901	7,351	7,882	7,250	5,667	4,889
92 U TX Arlington	9,696	9,654	9,764	9,262	4,591	2,930	2,281	2,236
93 Wayne State University	9,439	8,272	7,704	7,014	2,875	2,556	2,338	2,110
94 Syracuse University	9,328	11,945	13,214	9,938	5,387	5,841	5,832	4,367
95 U Arkansas Main	9,096	10,451	10,220	8,733	3,980	3,840	3,675	1,941
96 Vanderbilt University	8,903	8,995	10,579	8,591	6,586	7,129	8,327	6,813
97 CUNY City College	8,889	9,521	6,761	6,532	5,398	4,718	3,178	3,713
98 George Washington U	8,658	7,888	6,351	6,883	6,816	6,894	5,165	5,716
99 Boston University	8,639	8,013	7,732	7,049	6,508	6,027	5,881	5,565
100 University of Idaho	8,477	7,798	7,303	6,720	1,751	2,174	1,701	2,295
Total, 1st 100 institutions	3,239,596	3,095,277	2,965,505	2,800,732	1,979,435	1,877,010	1,791,022	1,673,176
Total, all other sampled insts	413,208	382,849	353,547	355,146	223,053	206,356	184,566	184,754
Estimated total non-sampled insts	22,002	22,329	21,812	0	13,867	14,784	14,726	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-48. R&D expenditures in engineering subfields at universities and colleges: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
Total, all institutions	3,674,806	229,723	311,240	449,976	875,756	519,999	360,106	928,006
1 Johns Hopkins Univ	213,465	21,136	4,792	4,774	63,884	44,339	1,166	73,374
2 MA Institute of Tech	164,816	24,690	17,788	13,781	56,110	19,227	12,868	20,352
3 Georgia Institute of Tech	149,412	11,319	5,879	9,414	70,115	17,885	11,322	23,478
4 Pennsylvania State U	138,718	10,394	4,077	6,524	42,102	18,683	26,320	30,618
5 University of Michigan	108,668	4,492	2,436	14,704	46,176	17,286	16,606	6,968
6 U TX Austin	101,222	6,074	7,515	16,599	8,791	23,116	2,180	36,947
7 Texas A&M University	97,848	3,925	11,074	35,429	5,302	12,694	3,006	26,418
8 Stanford University	89,231	4,942	4,037	8,534	21,373	13,016	1,829	35,500
9 U CA Berkeley	69,000	0	2,042	19,091	31,966	5,081	3,523	7,297
10 U MD College Park	65,537	6,901	1,251	4,542	13,722	7,804	5,654	25,663
Total, 1st 10 institutions	1,197,917	93,873	60,891	133,392	359,541	179,131	84,474	286,615
11 Purdue University	62,490	4,383	5,723	8,256	12,604	9,291	3,686	18,547
12 U of Illinois Urbana	61,712	2,223	1,896	8,344	12,394	11,999	21,215	3,641
13 NC State U Raleigh	61,709	0	10,758	9,090	10,366	4,998	6,321	20,176
14 Ohio State University	61,403	3,946	3,209	2,874	6,563	6,681	12,301	25,829
15 U WI Madison	53,094	0	6,367	2,123	9,636	2,978	3,677	28,313
16 Cornell University	44,724	4,138	2,443	3,751	12,267	1,364	3,847	16,914
17 New Mexico State Univ	42,742	17,345	6,971	648	5,116	5,841	2,464	4,357
18 Iowa State University	42,150	1,533	1,209	7,214	4,202	1,818	824	25,350
19 VA Polytech Inst & St U	39,562	2,784	1,842	4,360	9,057	8,514	3,925	9,080
20 U CA Santa Barbara	37,759	0	4,240	0	21,132	2,450	9,728	209
Total, 1st 20 institutions	1,705,262	130,225	105,549	180,052	462,878	235,065	152,462	439,031
21 University of Dayton	37,150	4,254	2,431	7	2,532	7,633	11,867	8,426
22 U of Southern California	36,933	2,669	1,216	2,224	17,568	1,797	2,242	9,217
23 Princeton University	36,447	9,817	2,402	4,037	12,918	0	6,957	316
24 University of New Mexico	36,001	0	4,093	11,640	4,809	756	11,490	3,213
25 Louisiana St U, All Camp	34,767	0	3,985	3,369	2,452	2,288	6,492	16,181
26 University of Connecticut	34,200	0	132	8,590	4,603	1,341	13,091	6,443
27 University of Minnesota	34,080	3,353	10,973	6,918	5,981	5,326	0	1,529
28 Carnegie Mellon U	32,827	0	2,006	2,340	11,739	2,314	4,687	9,741
29 U of Washington	31,787	2,021	1,802	4,708	5,927	2,637	1,408	13,284
30 U CA San Diego	31,373	0	4,643	0	11,282	3,938	1,188	10,322
Total, 1st 30 institutions	2,050,827	152,339	139,232	223,885	542,689	263,095	211,884	517,703
31 University of Rochester	31,104	0	841	0	2,544	21,500	0	6,219
32 University of Colorado	30,788	10,608	2,958	4,305	9,982	2,776	66	93
33 University of Florida	30,446	348	2,764	7,010	4,321	3,036	8,101	4,866
34 California Inst of Tech	29,238	5,796	3,598	440	5,481	1,381	1,237	11,305
35 U CA Los Angeles	28,509	0	2,035	1,433	13,959	8,484	1,874	724
36 Northwestern University	28,402	0	1,611	2,601	3,774	1,186	5,293	13,937
37 Arizona State University	28,147	626	2,811	3,586	9,568	8,300	0	3,256
38 Lehigh University	27,915	0	3,655	5,339	8,231	3,629	3,691	3,370
39 U of Tennessee System	27,444	5,354	3,978	7,015	3,185	0	1,528	6,384
40 Rensselaer Polytech Inst	26,694	0	2,006	5,421	6,414	4,283	2,723	5,847
Total, 1st 40 institutions	2,339,514	175,071	165,489	261,035	610,148	317,670	236,397	573,704
41 Clemson University	26,066	0	1,219	5,798	4,517	2,519	0	12,013
42 Case Western Reserve U	25,625	0	9,198	727	5,458	2,222	3,744	4,276
43 University of Houston	25,212	8,387	2,041	2,119	1,515	3,697	7,150	303
44 Rutgers the State U NJ	24,686	501	2,634	415	3,440	5,027	9,770	2,899
45 Utah State University	24,219	0	10	913	21,094	648	0	1,554
46 SUNY Buffalo	23,367	0	1,438	10,198	1,835	6,959	0	2,937
47 University of Virginia	21,097	411	1,315	1,976	4,479	3,517	5,454	3,945
48 University of Arizona	20,896	755	2,397	4,845	4,382	2,266	2,837	3,414
49 Univ of North Dakota	20,741	0	45	17	26	16	0	20,637
50 U of Iowa	19,965	0	1,808	5,519	1,067	10,365	0	1,206
Total, 1st 50 institutions	2,571,388	185,125	187,594	293,562	657,961	354,906	265,352	626,888

See explanatory information and SOURCE at end of table.

Table B-48. R&D expenditures in engineering subfields at universities and colleges: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
51 University of Kentucky	19,565	0	939	180	595	1,015	0	16,836
52 Oklahoma State University	19,411	388	1,009	975	1,356	2,489	0	13,194
53 Auburn University	18,579	593	2,070	1,364	5,904	2,171	991	5,486
54 University of Utah	18,482	0	2,826	4,593	1,312	4,448	939	4,364
55 U of South Carolina	18,469	0	4,893	588	3,207	8,403	0	1,378
56 Mississippi State U	18,056	2,668	773	489	498	585	0	13,043
57 NJ Inst of Technology	17,937	0	3,049	2,789	2,276	612	0	9,211
58 University of Cincinnati	17,898	1,375	995	6,868	4,078	1,854	2,728	0
59 Colorado State University	17,406	0	2,514	5,492	4,125	5,046	0	229
60 University of Delaware	17,369	0	6,179	2,941	2,521	2,479	0	3,249
Total, 1st 60 institutions	2,754,560	190,149	212,841	319,841	683,833	384,008	270,010	693,878
61 U CA Davis	17,349	0	3,023	5,368	2,311	2,602	0	4,045
62 Oregon State University	17,305	34	773	5,435	2,599	1,680	1,158	5,626
63 U of South Florida	16,501	0	524	8,263	7,035	345	0	334
64 Michigan State University	16,403	0	6,739	2,515	1,892	1,733	2,464	1,060
65 University of Oklahoma	15,564	13	6,238	4,260	1,877	1,581	0	1,595
66 U of Nebraska Lincoln	15,424	0	520	4,760	2,050	1,302	2,889	3,903
67 Michigan Tech University	14,801	0	2,596	3,735	548	3,965	2,604	1,353
68 U of Central Florida	14,742	420	0	870	11,631	170	0	1,651
69 Colorado School of Mines	14,406	0	4,187	0	0	0	8,493	1,726
70 Woods Hole Oceanograph	14,313	1,018i	1,060i	1,115i	3,553i	3,066i	0i	4,501i
Total, 1st 70 institutions	2,911,368	191,634	238,501	356,162	717,329	400,452	287,618	719,672
71 U of Missouri Rolla	14,248	0	366	1,071	1,011	2,307	7,195	2,298
72 U of Alabama Huntsville	14,156	0	2,266	60	2,438	5,066	1,963	2,363
73 NM Inst Mining & Tech	13,890	0	4,643	0	112	0	836	8,299
74 U of Missouri Columbia	13,324	0	1,774	1,664	1,154	822	2,026	5,884
75 U CA Irvine	13,048	0	1,350	5,486	2,820	3,253	0	139
76 West Virginia University	13,042	0	16	4,026	474	5,647	646	2,233
77 Columbia University	12,866	0	1,966	573	4,312	354	1,601	4,060
78 Drexel University	12,650	0	540	612	2,756	1,060	3,544	4,138
79 U of Pennsylvania	12,564	0	990	2	1,296	1,483	4,275	4,518
80 Stevens Inst of Tech	12,449	0	1,413	74	2,343	3,796	1,200	3,623
Total, 1st 80 institutions	3,043,605	191,634	253,825	369,730	736,045	424,240	310,904	757,227
81 Kansas State University	11,376	0	2,804	1,823	450	761	0	5,538
82 U MA Amherst	10,685	0	1,473	2,296	3,934	2,353	0	629
83 Duke University	10,666	0	0	609	1,910	2,523	0	5,624
84 Washington State U	10,576	0	974	2,117	2,969	2,084	206	2,226
85 University of IL Chicago	10,546	0	546	1,157	5,955	2,365	0	523
86 Mercer University	10,451	2,235	336	0	1,262	2,078	4,540	0
87 Texas Tech University	10,294	0	919	2,470	2,714	1,094	1,994	1,103
88 Brown University	10,249	730i	747i	790i	2,491i	2,288i	0i	3,203i
89 Ohio University	10,174	0	2,409	1,365	4,895	495	0	1,010
90 The University of Alabama	10,084	1,663	2,616	255	141	1,013	3,140	1,256
Total, 1st 90 institutions	3,148,706	196,262	266,649	382,612	762,766	441,294	320,784	778,339
91 NC A&T State University	9,765	0	547	956	2,656	2,926	0	2,680
92 U TX Arlington	9,696	0	0	280	1,568	1,254	0	6,594
93 Wayne State University	9,439	0	1,427	528	1,351	2,232	371	3,530
94 Syracuse University	9,328	141	1,319	1,113	2,070	996	216	3,473
95 U Arkansas Main	9,096	0	974	2,096	3,774	746	0	1,506
96 Vanderbilt University	8,903	0	310	993	2,411	1,726	2,019	1,444
97 CUNY City College	8,889	0	1,102	4,342	1,460	1,757	0	228
98 George Washington U	8,658	4,152	0	0	1,558	0	0	2,948
99 Boston University	8,639	508	0	0	1,865	644	821	4,801
100 University of Idaho	8,477	0	1,111	419	2,781	316	1,060	2,790
Total, 1st 100 institutions	3,239,596	201,063	273,439	393,339	784,260	453,891	325,271	808,333
Total, all other sampled insts	413,208	26,946	37,249	54,021	84,830	61,229	34,563	114,370
Estimated total non-sampled insts	22,002	1,714	552	2,616	6,666	4,879	272	5,303

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-49. Federally financed R&D expenditures in engineering subfields at universities and colleges: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Aero/ astro- nautical	Chemical	Civil	Elec- trical	Mechan- ical	Metal- lurgical and materials	Other
Total, all institutions	2,216,355	167,923	171,130	196,488	592,202	339,666	190,150	558,796
1 Johns Hopkins Univ	209,128	20,435	4,605	3,552	63,652	43,769	964	72,151
2 MA Institute of Tech	112,703	19,000	10,443	8,574	44,043	8,153	8,404	14,086
3 Pennsylvania State U	90,452	8,288	1,522	951	32,666	11,908	13,495	21,622
4 Stanford University	80,295	4,723	3,961	7,504	16,923	12,457	798	33,929
5 Georgia Institute of Tech	76,917	5,827	3,027	4,846	36,095	9,207	5,828	12,087
6 U TX Austin	65,877	4,662	4,187	2,910	4,218	17,840	987	31,073
7 University of Michigan	65,291	3,480	1,296	10,253	26,184	10,938	7,328	5,812
8 New Mexico State Univ	36,132	15,840	6,305	453	3,916	5,198	2,222	2,198
9 U of Illinois Urbana	35,736	1,715	1,004	4,123	8,457	6,596	11,644	2,197
10 U CA Berkeley	35,130	0	1,395	3,027	22,431	3,897	1,959	2,421
Total, 1st 10 institutions	807,661	83,970	37,745	46,193	258,585	129,963	53,629	197,576
11 U MD College Park	33,374	3,862	128	1,979	9,140	3,968	2,879	11,418
12 U WI Madison	32,616	0	3,204	698	6,115	1,206	2,828	18,565
13 Purdue University	32,428	2,347	2,492	4,403	7,786	4,127	3,076	8,197
14 Texas A&M University	32,278	2,076	2,981	9,067	1,996	2,616	0	13,542
15 U CA Santa Barbara	32,039	0	2,987	0	19,174	2,124	7,679	75
16 University of Dayton	30,375	3,814	2,170	0	1,967	3,702	10,665	8,057
17 U of Southern California	30,032	2,268	740	1,277	15,350	1,662	2,018	6,717
18 Cornell University	29,517	2,586	1,876	1,803	7,097	1,142	3,152	11,861
19 NC State U Raleigh	27,946	0	4,810	3,590	4,919	2,576	1,603	10,448
20 University of Rochester	27,679	0	574	0	2,312	20,354	0	4,439
Total, 1st 20 institutions	1,115,945	100,923	59,707	69,010	334,441	173,440	87,529	290,895
21 California Inst of Tech	26,507	5,559	2,620	320	4,857	1,192	1,220	10,739
22 U CA San Diego	23,959	0	4,637	0	7,053	3,049	1,188	8,032
23 University of New Mexico	23,927	0	2,833	6,293	3,124	582	8,354	2,741
24 Princeton University	22,847	7,008	1,324	1,728	7,156	0	5,627	4
25 VA Polytech Inst & St U	22,086	2,193	725	1,535	5,218	5,719	2,267	4,429
26 University of Minnesota	21,388	2,876	8,141	2,323	4,650	3,075	0	323
27 U CA Los Angeles	21,352	0	1,657	754	10,354	7,136	1,257	194
28 Carnegie Mellon U	19,500	0	1,456	1,554	6,563	1,561	2,689	5,677
29 Iowa State University	19,036	1,047	675	3,370	1,042	1,020	314	11,568
30 Ohio State University	18,412	1,278	967	347	2,391	2,690	4,741	5,998
Total, 1st 30 institutions	1,334,959	120,884	84,742	87,234	386,849	199,464	115,186	340,600
31 Northwestern University	17,925	0	1,238	1,810	2,688	750	4,163	7,276
32 Univ of North Dakota	17,922	0	26	13	17	1	0	17,865
33 U of Washington	17,843	1,842	678	2,237	2,791	1,810	435	8,050
34 Utah State University	17,793	0	0	91	16,728	389	0	585
35 Lehigh University	17,526	0	637	3,891	7,876	1,934	2,237	951
36 Rensselaer Polytech Inst	17,267	0	1,328	3,510	4,783	1,988	1,769	3,889
37 University of Florida	16,988	283	1,680	1,530	2,560	2,109	6,387	2,439
38 Case Western Reserve U	16,825	0	5,841	387	3,075	1,607	3,154	2,761
39 University of Colorado	16,142	5,364	1,469	1,921	5,308	2,013	0	67
40 SUNY Buffalo	15,074	0	637	6,834	1,190	5,651	0	762
Total, 1st 40 institutions	1,506,264	128,373	98,276	109,458	433,865	217,716	133,331	385,245
41 University of Virginia	13,683	378	910	1,722	2,934	1,350	3,944	2,445
42 Mississippi State U	13,058	812	722	60	413	474	0	10,577
43 Louisiana St U, All Camp	12,889	0	1,884	632	949	436	0	8,988
44 University of Utah	12,866	0	1,699	3,853	687	3,870	754	2,003
45 U of South Carolina	12,632	0	3,015	470	2,874	5,572	0	701
46 U of Central Florida	12,596	393	0	548	10,413	161	0	1,081
47 University of Arizona	12,466	535	1,231	3,715	2,075	1,606	1,790	1,514
48 Auburn University	12,270	296	848	744	5,007	1,442	579	3,354
49 University of Houston	11,920	6,131	898	966	785	2,144	899	97
50 U of Tennessee System	11,854	1,626	2,533	2,298	2,441	0	806	2,150
Total, 1st 50 institutions	1,632,498	138,544	112,016	124,466	462,443	234,771	142,103	418,155

See explanatory information and SOURCE at end of table

Table B-49. Federally financed R&D expenditures in engineering subfields at universities and colleges: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Aero/ astro-nautical	Chemical	Civil	Elec-trical	Mechan-ical	Metal-lurgical and materials	Other
51 Rutgers the State U NJ	11,645	492	1,502	60	2,497	4,456	2,088	550
52 Oregon State University	11,552	34	405	4,315	1,465	626	567	4,140
53 Woods Hole Oceanograph	11,486	820i	895i	904i	2,999i	2,226i	0i	3,642i
54 NJ Inst of Technology	11,203	0	1,323	1,972	582	271	0	7,055
55 University of Cincinnati	10,952	793	345	4,747	2,779	1,516	772	0
56 Mercer University	9,939	2,216	335	0	1,241	1,927	4,220	0
57 Arizona State University	9,826	10	1,157	1,350	3,981	2,811	0	517
58 U of Pennsylvania	9,514	0	646	0	1,161	1,161	2,685	3,861
59 University of Delaware	9,468	0	3,059	1,784	1,825	1,200	0	1,600
60 Oklahoma State University	9,277	45	156	185	474	934	0	7,483
Total, 1st 60 institutions	1,737,360	142,954	121,839	139,783	481,447	251,899	152,435	447,003
61 U of Iowa	8,885	0	1,176	1,363	596	5,466	0	284
62 U of Alabama Huntsville	8,862	0	1,692	44	1,449	3,335	1,276	1,066
63 Drexel University	8,685	0	260	266	1,747	609	2,434	3,369
64 Clemson University	8,636	0	403	1,921	1,497	835	0	3,980
65 U CA Davis	8,187	0	1,789	951	1,019	1,031	0	3,397
66 Michigan Tech University	8,140	0	913	2,976	338	2,035	1,301	577
67 West Virginia University	7,986	0	11	2,495	326	3,524	243	1,387
68 Colorado State University	7,940	0	1,252	2,736	2,670	1,149	0	133
69 NC A&T State University	7,882	0	427	628	2,523	2,253	0	2,051
70 Columbia University	7,663	0	211	361	1,557	309	1,508	3,717
Total, 1st 70 institutions	1,820,226	142,954	129,973	153,524	495,169	272,445	159,197	466,964
71 US Naval Postgrad School	7,439i	2,668i	0i	0i	3,305i	1,171i	295i	0i
72 Stevens Inst of Tech	7,319	0	975	0	2,014	3,374	432	524
73 University of Kentucky	7,283	0	577	100	400	824	0	5,382
74 University of Connecticut	7,253	0	33	774	1,681	704	1,502	2,559
75 Brown University	7,150	510i	550i	565i	1,877i	1,385i	0i	2,263i
76 Florida International U	7,034	0	0	751	968	5,315	0	0
77 Colorado School of Mines	7,028	0	2,503	0	0	0	3,383	1,142
78 Duke University	7,015	0	0	304	856	1,521	0	4,334
79 George Washington U	6,816	3,617	0	0	953	0	0	2,246
80 U of South Florida	6,612	0	210	1,792	4,345	230	0	35
Total, 1st 80 institutions	1,891,175	149,749	134,821	157,810	511,568	286,969	164,809	485,449
81 Vanderbilt University	6,586	0	133	739	1,380	1,381	1,865	1,088
82 Boston University	6,508	448	0	0	1,205	503	521	3,831
83 U CA Irvine	6,411	0	987	1,189	1,576	2,659	0	0
84 The University of Alabama	6,356	1,338	1,872	153	61	303	1,856	773
85 Northeastern University	6,252	0	154	143	4,010	212	0	1,733
86 George Mason University	6,091	0	0	0	816	0	0	5,275
87 Washington State U	5,982	0	685	1,114	1,805	1,513	32	833
88 Worcester Polytech Inst	5,678	0	1,116	91	665	2,511	0	1,295
89 CUNY City College	5,398	0	937	2,431	1,117	759	0	154
90 Syracuse University	5,387	114	705	242	1,833	489	0	2,004
Total, 1st 90 institutions	1,951,824	151,649	141,410	163,912	526,036	297,299	169,083	502,435
91 U MA Amherst	5,294	0	711	578	3,117	740	0	148
92 Michigan State University	5,224	0	3,062	241	492	534	530	365
93 University of Notre Dame	5,084	1,216	920	1,054	1,894	0	0	0
94 Yale University	4,981	0	1,057	0	1,867	868	0	1,189
95 University of Pittsburgh	4,965	0	1,115	393	371	145	2,068	873
96 Brigham Young University	4,883i	2,088i	888i	816i	697i	218i	0i	176i
97 Ohio University	4,827	0	85	606	3,488	228	0	420
98 Florida Atlantic U	4,788	0	0	0	1,414	174	0	3,200
99 Kansas State University	4,755	0	2,421	680	168	231	0	1,255
100 University of IL Chicago	4,740	0	307	412	3,027	994	0	0
Total, 1st 100 institutions	2,001,365	154,953	151,976	168,692	542,571	301,431	171,681	510,061
Total, all other sampled insts	201,123	11,951	18,894	26,970	44,130	34,658	18,270	46,250
Estimated total non-sampled insts	13,867	1,019	260	826	5,501	3,577	199	2,485

NOTE: Because of rounding, detail may not add to totals

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-50. R&D expenditures in the physical sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Astronomy	Chemistry	Physics	Other
Total, all institutions	2,260,281	2,251,011	2,171,987	2,130,300	279,098	800,985	990,096	190,103
1 Johns Hopkins Univ	118,464	115,743	117,188	116,033	32,772	5,581	74,032	6,079
2 MA Institute of Tech	97,350	98,021	101,004	106,256	7,673	14,856	74,821	0
3 University of Arizona	84,643	103,066	91,765	65,920	62,376	5,601	16,666	0
4 California Inst of Tech	75,331	64,645	54,539	51,180	9,179	15,599	50,553	0
5 U CA Berkeley	67,181	63,205	59,996	63,693	13,906	14,277	38,998	0
6 U MD College Park	56,690	57,171	56,381	65,431	7,907	8,901	31,259	8,623
7 Stanford University	51,047	47,373	44,030	46,532	0	12,253	4,855	33,939
8 U TX Austin	50,515	54,270	64,108	64,258	8,587	11,393	12,008	18,527
9 Cornell University	50,239	45,614	45,211	44,976	6,079	11,712	30,405	2,043
10 U of Illinois Urbana	42,032	35,926	38,500	40,517	2,216	12,956	9,055	17,805
Total, 1st 10 institutions	693,492	685,034	672,722	664,796	150,695	113,129	342,652	87,016
11 Florida State University	41,672	54,993	46,225	38,281	0	5,273	9,326	27,073
12 University of Colorado	40,795	39,843	38,205	28,968	17,351	12,701	10,527	216
13 U CA San Diego	39,637	35,502	35,450	43,430	8,275	9,683	19,636	2,043
14 U WI Madison	38,439	38,527	39,838	36,719	4,758	12,910	13,867	6,904
15 Michigan State University	27,871	24,979	23,638	27,577	0	6,007	21,864	0
16 University of Chicago	27,859	29,790	30,030	27,195	10,496	7,791	9,365	207
17 Indiana University	26,645	27,144	29,262	29,225	1,181	9,081	16,362	21
18 Harvard University	25,245	29,019	31,718e	28,041	3,421	11,362	10,365	97
19 Pennsylvania State U	25,164	26,069	22,486	20,733	3,739	12,670	7,988	767
20 Princeton University	24,918	25,793	25,463	24,071	5,071	7,610	12,237	0
Total, 1st 20 institutions	1,011,737	1,016,693	995,037	969,036	204,987	208,217	474,189	124,344
21 U of Pennsylvania	24,478	22,910	23,245	19,047	0	12,855	11,623	0
22 U CA Los Angeles	24,079	27,619	24,069	24,577	2,445	10,859	10,775	0
23 U CA Santa Cruz	23,722	21,139	19,761	17,800	10,793	6,439	5,353	1,137
24 SUNY Stony Brook	22,815	24,294	23,179	22,141	1,929	6,291	14,545	50
25 Texas A&M University	22,552	21,920	21,890	18,015	0	12,478	6,097	3,977
26 Univ of Hawaii Manoa	22,069	26,427	20,223	22,267	18,239	1,839	1,991	0
27 U MA Amherst	20,647	16,706	15,835	15,077	0	9,322	10,342	983
28 Columbia University	20,537	23,538	21,433	18,125	3,203	7,996	2,611	6,727
29 U CA Irvine	20,496	15,306	14,388	15,236	0	10,127	10,204	165
30 Ohio State University	20,229	20,200	19,834	18,645	904	10,784	8,509	32
Total, 1st 30 institutions	1,233,361	1,236,752	1,198,894	1,159,966	242,500	297,207	556,239	137,415
31 U CA Santa Barbara	20,133	19,096	17,084	16,588	0	5,544	8,819	5,770
32 U of Washington	20,099	22,760	19,375	18,591	3,989	6,914	9,196	0
33 University of Michigan	19,179	19,979	22,972	30,577	961	6,007	11,415	796
34 Purdue University	19,092	21,070	18,772	16,730	0	10,927	8,165	0
35 Arizona State University	18,962	16,534	15,058	16,914	228	9,087	5,033	4,614
36 Rutgers the State U NJ	18,396	18,312	17,121	19,062	0	7,523	10,873	0
37 Georgia Institute of Tech	17,984	22,840	20,390	15,761	0	8,302	9,682	0
38 University of Minnesota	15,922	15,913	15,802	16,735	2,038	7,468	6,416	0
39 Yale University	15,853	18,879	18,677	19,473	1,096	5,544	9,213	0
40 U of Iowa	14,860	14,834	14,569	16,855	1,189	2,970	10,701	0
Total, 1st 40 institutions	1,413,841	1,426,969	1,378,714	1,347,252	252,001	367,493	645,752	148,595
41 U of Alaska Fairbanks	13,752i	14,542i	15,465i	14,134i	4,670i	1,279i	7,229i	574i
42 University of Florida	13,470	11,516	11,880	12,243	800	7,598	5,071	1
43 Duke University	13,366	13,138	12,323	12,286	0	4,636	8,730	0
44 Boston University	13,156	11,344	9,701	10,463	566	1,722	10,320	548
45 University of Rochester	12,803	12,909	13,126	14,313	584	7,012	5,207	0
46 NC State U Raleigh	12,234	10,848	9,379	8,785	0	3,444	8,790	0
47 University of Virginia	12,161	12,724	14,644	13,536	1,074	5,580	5,502	5
48 Northwestern University	11,844	12,164	12,465	11,949	0	7,476	4,352	16
49 University of Notre Dame	11,532	12,393	12,569	13,364	0	8,030	3,502	0
50 U of Tennessee System	11,203	12,061	13,530	13,109	0	4,331	6,872	0
Total, 1st 50 institutions	1,539,362	1,550,608	1,503,796	1,471,434	259,695	418,601	711,327	149,739

See explanatory information and SOURCE at end of table

Table B-50. R&D expenditures in the physical sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Astronomy	Chemistry	Physics	Other
51 Louisiana St U, All Camp	11,141	11,211	10,811	10,377	0	4,761	5,838	542
52 University of Pittsburgh	10,660	12,775	12,179	12,159	738	5,904	3,682	336
53 U CA Davis	10,505	9,499	8,361	8,859	0	3,589	3,481	3,435
54 U of South Carolina	9,968	7,603	7,646	6,346	0	6,321	3,384	263
55 U of NC Chapel Hill	9,760	9,186	9,415	9,246	0	7,492	2,268	0
56 University of Oklahoma	9,675	7,815	8,566	7,585	0	7,042	2,633	0
57 University of Georgia	9,601	10,095	8,658	7,831	0	6,332	3,269	0
58 University of Utah	9,512	9,911	9,215	9,163	0	6,371	3,141	0
59 Iowa State University	9,407	9,555	6,764	5,944	0	5,618	3,789	0
60 VA Polytech Inst & St U	9,342	9,867	9,187	9,249	0	6,737	2,568	37
Total, 1st 60 institutions	1,638,933	1,648,125	1,594,598	1,558,193	260,433	478,768	745,380	154,352
61 U of Southern California	9,288	7,884	7,014	7,843	184	5,908	3,196	0
62 U of Alabama Huntsville	8,906	8,446	7,805	10,433	0	3,604	5,302	0
63 Brown University	8,791	8,018	7,492	8,330	0	3,746	5,045	0
64 Rice University	8,696	8,332	8,943	8,853	2,753	3,545	2,398	0
65 University of Houston	8,666	7,912	8,755	18,860	0	5,196	3,470	0
66 Wayne State University	8,649	9,828	9,526	8,517	0	4,062	4,587	0
67 University of Kansas	8,645	9,360	8,411	5,997	0	6,521	1,456	668
68 University of Delaware	8,501	10,537	8,993	8,787	0	3,857	1,073	3,571
69 Washington University	8,368	8,994	8,070	7,765	0	3,856	4,512	0
70 CUNY City College	8,220	7,150	6,461	7,260	0	3,795	4,425	0
Total, 1st 70 institutions	1,725,663	1,734,586	1,676,068	1,650,838	263,370	522,858	780,844	158,591
71 Colorado State University	8,126	7,126	7,740	8,372	0	5,807	2,176	143
72 Carnegie Mellon U	8,065	7,738	7,551	7,323	0	2,928	4,506	631
73 SUNY Buffalo	8,038	8,491	8,108	7,067	0	5,630	1,635	773
74 Kent State University	8,013i	7,595i	8,025	8,136	0i	217i	1,775i	6,021i
75 Vanderbilt University	7,908	7,497	8,056	7,777	0	2,491	5,417	0
76 University of Akron	7,571	7,913	8,325	10,021	0	1,361	88	6,122
77 University of Oregon	7,305	6,943	12,123	12,097	0	2,806	4,499	0
78 Montana St U Bozeman	7,223	5,623	3,857	3,823	0	2,879	4,344	0
79 New York University	7,000	4,873	3,466	3,847	0	5,905	1,095	0
80 Oregon Grad Inst Sci Tech	6,528	6,502	6,171	6,128	0	3,347	3,181	0
Total, 1st 80 institutions	1,801,440	1,804,887	1,749,490	1,725,429	263,370	556,229	809,560	172,281
81 U TX Dallas	6,513	6,071i	5,622	7,270	0	2,694	3,819	0
82 The Rockefeller Univ	6,478	7,777	6,028	6,037	0	4,289	2,189	0
83 University of IL Chicago	6,453	7,225	7,464	8,207	0	3,519	2,934	0
84 Illinois Inst of Tech	6,378	2,563	1,238	870	0	1,883	4,495	0
85 Tufts University	6,343	3,924	3,190	2,161e	0	4,801	1,542	0
86 Emory University	6,289	6,201	5,495	6,032	0	5,031	1,258	0
87 University of New Mexico	6,257	5,405	4,439	4,390	0	2,730	3,527	0
88 Oklahoma State University	6,193	6,470	7,008	7,702	0	1,694	3,807	692
89 U of Missouri Columbia	6,058	9,227	8,721	7,621	0	4,474	1,584	0
90 Clark Atlanta University	6,000	5,978	3,880	3,695	0	3,220	2,780	0
Total, 1st 90 institutions	1,864,402	1,865,728	1,802,575	1,779,414	263,370	590,564	837,495	172,973
91 U of Nebraska Lincoln	5,782	7,749	6,535	7,389	0	3,607	2,175	0
92 Kansas State University	5,734	5,697	5,235	4,214	0	1,962	3,772	0
93 Oregon State University	5,649	4,448	4,154	4,362	0	4,259	1,389	1
94 U CA Riverside	5,475	4,945	6,196	5,164	0	3,124	2,351	0
95 Utah State University	5,470	6,217	5,877	5,497	0	2,329	3,141	0
96 Case Western Reserve U	5,451	6,506	5,422	5,345	20	3,025	2,406	0
97 U MA Lowell	5,426	5,308	5,419	4,564	0	2,515	2,911	0
98 Rensselaer Polytech Inst	5,365	6,100	6,416	7,007	0	3,264	2,101	0
99 Howard University	5,276	5,238	3,109	2,184	4,362	826	0	88
100 Syracuse University	5,231	4,590	5,896	5,255	0	1,705	3,416	110
Total, 1st 100 institutions	1,919,261	1,922,526	1,856,834	1,830,395	267,752	617,180	861,157	173,172
Total, all other sampled insts	303,974	298,856	289,334	299,905	9,048	160,579	118,885	15,462
Estimated total non-sampled insts	37,046	29,629	25,819	0	2,298	23,226	10,054	1,469

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-51. Federally financed R&D expenditures in the physical sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Astronomy	Chemistry	Physics	Other
Total, all institutions	1,639,390	1,639,422	1,563,807	1,512,633	185,198	560,258	759,915	134,019
1 Johns Hopkins Univ	115,030	112,353	114,099	112,799	30,845	5,293	72,852	6,040
2 MA Institute of Tech	84,821	86,785	83,188	82,262	3,759	13,735	67,327	0
3 California Inst of Tech	70,337	58,369	49,691	46,825	8,673	12,478	49,186	0
4 University of Arizona	52,810	69,890	57,541	31,298	39,219	3,912	9,679	0
5 Stanford University	49,801	44,652	40,075	42,174	0	12,171	4,561	33,069
6 U CA Berkeley	48,383	47,267	45,382	51,601	4,491	12,050	31,842	0
7 Cornell University	40,847	39,052	40,029	39,800	2,951	8,805	27,473	1,618
8 U TX Austin	37,281	40,469	44,574	44,189	4,962	6,294	8,801	17,224
9 U CA San Diego	35,088	30,220	29,855	37,875	7,192	8,118	18,025	1,753
10 U of Illinois Urbana	32,154	29,093	31,668	33,235	1,708	7,616	7,165	15,665
Total, 1st 10 institutions	566,552	558,150	536,102	522,058	103,800	90,472	296,911	75,369
11 U WI Madison	29,470	29,581	29,656	27,544	4,411	9,318	11,151	4,590
12 U MD College Park	29,390	29,434	30,017	32,674	4,808	5,995	14,208	4,379
13 University of Chicago	25,134	25,335	26,887	25,269	9,500	6,938	8,696	0
14 University of Colorado	24,514	24,460	22,999	19,559	6,526	9,442	8,362	184
15 Harvard University	23,200	26,698	27,062	24,155	2,912	10,608	9,583	97
16 U of Pennsylvania	22,397	18,850	19,301	15,687	0	12,181	10,216	0
17 U CA Los Angeles	20,674	24,002	20,917	22,082	1,511	9,338	9,825	0
18 Indiana University	20,317	19,835	20,065	20,709	658	6,648	13,011	0
19 Florida State University	19,908	31,908	26,863	25,570	0	2,933	4,349	12,626
20 Princeton University	18,380	19,115	17,382	16,562	2,808	5,979	9,593	0
Total, 1st 20 institutions	799,936	807,368	777,251	751,869	136,934	169,852	395,905	97,245
21 Michigan State University	17,951	16,643	13,818	12,849	0	3,839	14,112	0
22 Columbia University	17,757	20,180	18,702	16,822	3,065	6,475	2,360	5,857
23 U CA Santa Barbara	17,661	16,746	15,095	14,723	0	4,935	7,699	5,027
24 Pennsylvania State U	16,779	16,791	13,994	12,749	3,131	8,294	5,354	0
25 U CA Irvine	16,247	13,673	12,975	13,411	0	7,529	8,715	3
26 Univ of Hawaii Manoa	15,211	19,562	14,828	16,448	11,988	1,632	1,591	0
27 SUNY Stony Brook	15,076	16,291	15,569	15,147	1,402	4,068	9,606	0
28 U of Washington	14,935	17,066	15,489	14,344	1,777	4,847	8,311	0
29 Yale University	14,097	16,828	17,009	16,600	642	4,848	8,607	0
30 Ohio State University	13,950	14,820	14,305	13,179	620	7,827	5,503	0
Total, 1st 30 institutions	959,600	975,968	929,035	898,141	159,559	224,146	467,763	108,132
31 Texas A&M University	13,688	11,406	10,613	9,358	0	7,518	3,544	2,626
32 University of Michigan	13,688	13,352	13,738	13,510	910	4,449	8,122	207
33 University of Minnesota	13,231	13,265	13,695	13,351	1,763	5,864	5,604	0
34 Purdue University	13,035	14,478	12,298	12,326	0	7,657	5,378	0
35 U MA Amherst	13,024	9,874	9,064	8,467	0	5,320	7,704	0
36 U CA Santa Cruz	12,064	9,813	9,558	8,925	2,085	4,564	4,333	1,082
37 University of Rochester	12,030	12,167	12,065	12,759	555	6,484	4,991	0
38 Duke University	11,461	11,241	10,688	10,335	0	3,445	8,016	0
39 U of Iowa	11,140	11,370	11,327	12,534	942	1,724	8,474	0
40 University of Virginia	10,022	10,027	11,541	10,251	969	4,527	4,526	0
Total, 1st 40 institutions	1,082,983	1,092,961	1,043,622	1,009,957	166,783	275,698	528,455	112,047
41 University of Notre Dame	9,944	10,467	10,557	11,175	0	7,100	2,844	0
42 Boston University	9,904	10,008	8,545	8,540	566	1,351	7,558	429
43 Arizona State University	9,740	8,824	10,077	8,779	0	4,426	3,754	1,560
44 Rutgers the State U NJ	9,614	9,555	9,161	9,496	0	5,467	4,147	0
45 University of Pittsburgh	9,267	10,779	10,263	10,490	515	5,234	3,212	306
46 Georgia Institute of Tech	9,258	11,307	10,222	8,818	0	4,274	4,984	0
47 U CA Davis	9,142	8,382	7,291	7,468	0	3,371	3,117	2,654
48 University of Utah	8,812	8,974	8,168	7,956	0	5,949	2,863	0
49 Northwestern University	8,677	9,402	9,078	8,444	0	5,266	3,411	0
50 U of NC Chapel Hill	7,775	6,969	7,263	7,356	0	6,285	1,490	0
Total, 1st 50 institutions	1,175,116	1,187,628	1,134,247	1,098,479	167,864	324,421	565,835	116,996

See explanatory information and SOURCE at end of table

Table B-51. Federally financed R&D expenditures in the physical sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Astronomy	Chemistry	Physics	Other
51 U of South Carolina	7,748	5,435	5,351	4,559	0	5,164	2,584	0
52 U of Southern California	7,608	6,869	6,418	7,196	156	4,735	2,717	0
53 U of Alaska Fairbanks	7,518i	9,235i	10,099i	10,309i	2,330i	333i	4,740i	115i
54 Rice University	7,451	6,981	7,276	7,000	2,401	2,853	2,197	0
55 University of Florida	7,181	5,948	5,775	6,026	563	4,197	2,421	0
56 NC State U Raleigh	7,124	5,870	6,494	5,495	0	2,532	4,592	0
57 Vanderbilt University	6,985	6,688	6,809	6,604	0	1,944	5,041	0
58 CUNY City College	6,906	6,253	5,811	5,603	0	3,466	3,440	0
59 U of Tennessee System	6,874	7,041	8,385	8,073	0	2,620	4,254	0
60 U of Alabama Huntsville	6,694	5,425	5,398	8,620	0	2,750	3,944	0
Total, 1st 60 institutions	1,247,205	1,253,373	1,202,063	1,167,964	173,314	355,015	601,765	117,111
61 Colorado State University	6,502	5,397	5,558	6,593	0	4,830	1,672	0
62 Washington University	6,272	6,930	6,139	6,137	0	3,134	3,138	0
63 Carnegie Mellon U	6,133	6,031	6,469	5,603	0	2,303	3,705	125
64 Louisiana St U, All Camp	6,057	6,024	6,011	6,028	0	2,511	3,539	7
65 University of Delaware	5,996	6,776	6,288	5,227	0	2,722	769	2,505
66 University of Oregon	5,933	5,374	8,536	8,028	0	2,357	3,576	0
67 Iowa State University	5,640	6,144	3,706	3,367	0	3,191	2,449	0
68 Brown University	5,362	4,944	4,171	5,026	0	2,278	3,084	0
69 VA Polytech Inst & St U	5,232	5,892	4,448	4,402	0	3,604	1,611	17
70 Kent State University	5,152i	4,336i	4,001	3,821	0i	188i	1,474i	3,490i
Total, 1st 70 institutions	1,305,484	1,311,221	1,257,390	1,222,196	173,314	382,133	626,782	123,255
71 SUNY Buffalo	5,124	5,051	5,114	4,326	0	3,740	924	460
72 Howard University	5,007	4,899	2,767	1,968	4,239	703	0	65
73 U CA Riverside	4,948	4,685	5,631	4,326	0	2,631	2,317	0
74 Tufts University	4,814	2,719	2,176	1,615	0	3,629	1,185	0
75 Kansas State University	4,804	4,664	4,362	3,502	0	1,353	3,451	0
76 Clark Atlanta University	4,789	5,768	3,437	3,271	0	2,556	2,233	0
77 U MA Lowell	4,626	4,087	3,936	3,121	0	2,133	2,493	0
78 U of Central Florida	4,619	4,890	3,552	2,526	0	293	4,326	0
79 Oregon State University	4,562	3,282	2,932	3,059	0	3,536	1,025	1
80 University of Oklahoma	4,516	4,110	3,634	3,101	0	3,198	1,318	0
Total, 1st 80 institutions	1,353,293	1,355,376	1,294,931	1,253,011	177,553	405,905	646,054	123,781
81 University of New Mexico	4,507	3,891	2,397	2,707	0	1,935	2,572	0
82 Alabama A&M University	4,481i	4,315	4,883	3,632	0i	224i	4,168i	89i
83 Emory University	4,468	4,697	4,091	4,536	0	3,821	647	0
84 U of Nebraska Lincoln	4,271	5,651	4,766	4,418	0	2,608	1,663	0
85 Montana St U Bozeman	4,154	3,465	2,893	2,306	0	1,910	2,244	0
86 University of Houston	4,134	3,939	4,865	13,424	0	2,231	1,903	0
87 Col of William & Mary	4,133	4,113	3,652	3,166	0	285	2,447	1,401
88 Case Western Reserve U	4,080	5,275	4,077	3,870	17	2,387	1,676	0
89 Utah State University	4,012	4,922	4,261	4,273	0	1,528	2,484	0
90 University of Kansas	4,010	3,887	3,262	2,936	0	2,995	796	219
Total, 1st 90 institutions	1,395,543	1,399,531	1,334,098	1,298,279	177,570	425,829	666,654	125,490
91 Georgetown University	3,828	3,626	3,757	4,134	0	3,762	66	0
92 Syracuse University	3,745	3,758	3,752	3,695	0	1,373	2,263	109
93 Washington State U	3,738	3,792	3,793	3,203	0	1,503	2,235	0
94 University of IL Chicago	3,671	4,309	4,960	4,949	0	2,041	1,630	0
95 U Southern Mississippi	3,662	3,472	3,842	3,547	0	3,523	139	0
96 University of Georgia	3,603	3,549	2,989	2,947	0	2,412	1,191	0
97 Rensselaer Polytech Inst	3,576	4,067	3,955	3,509	0	2,175	1,401	0
98 New York University	3,544	3,966	2,991	3,165	0	2,542	1,002	0
99 The Rockefeller Univ	3,486	3,515	3,851	3,613	0	2,321	1,165	0
100 Oregon Grad Inst Sci Tech	3,479	3,905	3,346	3,111	0	2,323	1,156	0
Total, 1st 100 institutions	1,431,875	1,437,490	1,371,334	1,334,152	177,570	449,804	678,902	125,599
Total, all other sampled insts	183,670	180,987	174,004	178,481	6,626	94,636	74,671	7,737
Estimated total non-sampled insts	23,845	20,945	18,469	0	1,002	15,818	6,342	683

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-52. Total and federally financed R&D expenditures in chemistry at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	800,985	771,850	759,245	740,221	560,258	536,247	520,028	505,172
1 California Inst of Tech	15,599	14,903	13,443	13,476	12,478	11,611	10,345	11,815
2 MA Institute of Tech	14,856	11,489	12,879	14,670	13,735	10,219	11,739	13,566
3 U CA Berkeley	14,277	15,634	13,546	13,566	12,050	13,503	11,609	12,023
4 U of Illinois Urbana	12,956	10,349	10,487	10,864	7,616	6,852	6,777	7,672
5 U WI Madison	12,910	10,948	11,430	10,383	9,318	7,947	8,545	7,484
6 U of Pennsylvania	12,855	10,846	11,744	10,556	12,181	8,184	9,342	8,642
7 University of Colorado	12,701	13,977	14,879	7,820	9,442	9,960	8,450	5,780
8 Pennsylvania State U	12,670	13,213	12,854	12,056	8,294	8,019	7,995	7,571
9 Texas A&M University	12,478	10,745	10,538	8,599	7,518	5,441	4,948	4,358
10 Stanford University	12,253	11,549	10,885	10,551	12,171	10,857	9,686	9,018
Total, 1st 10 institutions	133,555	123,653	122,685	112,541	104,803	92,593	89,436	87,929
11 Cornell University	11,712	10,807	10,594	10,091	8,805	8,667	9,149	8,538
12 U TX Austin	11,393	11,252	14,411	16,769	6,294	6,674	7,974	10,147
13 Harvard University	11,362	13,112	15,386e	13,442	10,608	12,347	13,080	11,600
14 Purdue University	10,927	11,665	9,759	8,913	7,657	8,266	6,978	6,805
15 U CA Los Angeles	10,859	12,523	10,422	12,136	9,338	10,840	9,061	10,824
16 Ohio State University	10,784	11,131	10,913	9,768	7,827	9,023	8,643	7,494
17 U CA Irvine	10,127	6,762	6,433	5,675	7,529	6,177	5,863	5,266
18 U CA San Diego	9,683	8,646	7,538	7,632	8,118	7,473	6,280	6,517
19 U MA Amherst	9,322	8,454	8,936	8,795	5,320	4,897	5,238	4,940
20 Arizona State University	9,087	7,568	7,063	7,726	4,426	4,192	5,087	4,453
Total, 1st 20 institutions	238,811	225,573	224,140	213,488	180,725	171,149	166,789	164,513
21 Indiana University	9,081	9,146	9,937	9,476	6,648	7,280	7,319	6,841
22 U MD College Park	8,901	9,887	11,666	11,449	5,995	6,274	5,936	5,468
23 Georgia Institute of Tech	8,302	8,204	6,548	6,661	4,274	4,061	3,283	3,727
24 University of Notre Dame	8,030	8,262	8,698	8,831	7,100	7,310	7,787	7,985
25 Columbia University	7,996	9,487	8,978	7,377	6,475	7,334	6,956	6,496
26 University of Chicago	7,791	7,317	8,801	7,767	6,938	6,190	7,516	6,850
27 Princeton University	7,610	8,547	9,231	7,564	5,979	5,850	5,130	4,567
28 University of Florida	7,598	6,017	6,562	7,106	4,197	3,419	3,286	3,371
29 Rutgers the State U NJ	7,523	7,202	6,525	7,706	5,467	5,304	5,044	5,267
30 U of NC Chapel Hill	7,492	6,911	7,258	7,270	6,285	5,562	5,999	6,266
Total, 1st 30 institutions	319,135	306,553	308,344	294,695	240,083	229,733	225,045	221,351
31 Northwestern University	7,476	7,857	8,202	7,975	5,266	5,889	5,564	5,168
32 University of Minnesota	7,468	8,275	7,585	6,851	5,864	6,590	6,442	5,666
33 University of Oklahoma	7,042	5,511	4,861	4,922	3,198	2,782	1,987	2,091
34 University of Rochester	7,012	6,546	6,865	6,924	6,484	5,987	6,253	6,395
35 U of Washington	6,914	7,428	6,526	7,034	4,847	5,252	4,703	4,496
36 VA Polytech Inst & St U	6,737	7,403	6,843	6,991	3,604	4,281	2,809	2,905
37 University of Kansas	6,521	7,205	6,033	4,208	2,995	2,811	2,236	1,951
38 U CA Santa Cruz	6,439	4,472	3,381	2,765	4,564	2,631	2,350	2,405
39 University of Utah	6,371	7,005	6,174	5,773	5,949	6,385	5,480	4,830
40 University of Georgia	6,332	6,576	5,562	5,331	2,412	2,337	1,944	2,015
Total, 1st 40 institutions	387,447	374,831	370,376	353,469	285,266	274,678	264,813	259,273
41 U of South Carolina	6,321	5,304	5,063	4,363	5,164	3,751	3,519	3,104
42 SUNY Stony Brook	6,291	7,342	6,101	4,880	4,068	4,809	4,048	3,333
43 Michigan State University	6,007	5,271	6,117	6,409	3,839	3,589	4,261	2,986
44 University of Michigan	6,007	5,574	7,479	9,518	4,449	4,109	3,865	3,386
45 U of Southern California	5,908	4,576	4,730	6,122	4,735	4,072	4,409	5,627
46 New York University	5,905	3,400	2,016	2,348	2,542	2,615	1,671	1,775
47 University of Pittsburgh	5,904	6,764	5,950	6,123	5,234	5,668	4,993	5,266
48 Colorado State University	5,807	5,179	5,035	5,211	4,830	4,124	3,873	4,352
49 SUNY Buffalo	5,630	5,350	5,373	4,444	3,740	3,518	3,736	2,870
50 Iowa State University	5,618	5,446	3,654	3,486	3,191	3,359	1,802	1,713
Total, 1st 50 institutions	446,845	429,037	421,894	406,373	327,058	314,292	300,990	293,685

See explanatory information and SOURCE at end of table.

Table B-52. Total and federally financed R&D expenditures in chemistry at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 University of Arizona	5,601	5,380	6,319	6,119	3,912	4,126	4,511	4,141
52 Johns Hopkins Univ	5,581	5,607	5,323	5,227	5,293	5,243	4,913	4,876
53 University of Virginia	5,580	5,877	6,932	5,555	4,527	4,576	5,621	4,471
54 U CA Santa Barbara	5,544	5,058	4,215	3,646	4,935	4,449	3,663	3,132
55 Yale University	5,544	6,446	6,681	8,186	4,848	5,620	6,027	7,017
56 Florida State University	5,273	5,607	4,482	4,341	2,933	2,445	1,722	1,819
57 University of Houston	5,196	4,814	5,943	15,420	2,231	2,283	3,321	11,706
58 Emory University	5,031	5,279	4,608	4,576	3,821	4,071	3,441	3,718
59 Tufts University	4,801	2,564	1,668	902e	3,629	1,723	1,071	572
60 Louisiana St U, All Camp	4,761	4,631	5,129	4,260	2,511	2,561	2,510	2,426
Total, 1st 60 institutions	499,757	480,300	473,194	464,605	365,698	351,389	337,790	337,563
61 Duke University	4,636	4,381	3,712	3,694	3,445	3,079	2,943	2,592
62 Georgetown University	4,575	4,652	4,867	5,348	3,762	3,618	3,724	4,076
63 U Southern Mississippi	4,518	4,108	4,402	4,130	3,523	3,348	3,773	3,503
64 U of Missouri Columbia	4,474	5,061	4,665	4,139	899	836	882	960
65 U of Tennessee System	4,331	4,080	4,891	4,823	2,620	2,375	3,241	3,107
66 The Rockefeller Univ	4,289	4,802	3,882	3,666	2,321	2,370	2,651	2,246
67 Oregon State University	4,259	3,099	2,647	2,841	3,536	2,188	1,726	1,963
68 Wayne State University	4,062	4,799	4,933	4,807	2,482	2,795	2,470	2,318
69 Boston College	3,887	3,796	2,837	2,350	2,967	3,017	2,377	2,012
70 University of Delaware	3,857	4,888	4,161	4,053	2,722	3,047	2,939	2,234
Total, 1st 70 institutions	542,645	523,966	514,191	504,456	393,975	378,062	364,516	362,574
71 Washington University	3,856	4,593	3,926	3,899	3,134	3,777	2,947	2,996
72 CUNY City College	3,795	3,138	3,228	3,488	3,466	3,068	3,170	3,388
73 Brown University	3,746	3,114	3,198	3,781	2,278	1,865	1,678	2,208
74 U of Nebraska Lincoln	3,607	5,003	3,924	4,198	2,608	3,391	2,758	2,576
75 U of Alabama Huntsville	3,604	3,651	3,717	5,252	2,750	2,287	2,433	4,309
76 U CA Davis	3,589	3,550	3,619	3,355	3,371	3,159	3,097	2,899
77 Rice University	3,545	3,080	3,729	3,491	2,853	2,297	2,894	2,569
78 University of IL Chicago	3,519	3,721	3,628	3,668	2,041	2,321	2,544	1,972
79 NC State U Raleigh	3,444	2,755	2,347	2,269	2,532	1,376	1,690	1,268
80 Oregon Grad Inst Sci Tech	3,347	3,750	3,444	3,583	2,323	2,580	1,971	2,190
Total, 1st 80 institutions	578,697	560,321	548,951	541,440	421,331	404,183	389,698	388,949
81 Rensselaer Polytech Inst	3,264	3,368	3,533	4,622	2,175	2,247	2,161	2,315
82 Clark Atlanta University	3,220	3,029	2,570	2,447	2,556	2,878	2,181	2,075
83 Texas Tech University	3,183	2,938	3,077	3,176	1,032	885	946	1,318
84 U CA Riverside	3,124	3,718	3,011	3,054	2,631	3,478	2,622	2,343
85 North Dakota State U	3,079	4,026	4,473	4,145	1,680	1,547	1,736	1,353
86 Virginia Commonwealth U	3,065	2,606	2,323	2,155	1,293	1,275	1,360	1,316
87 Case Western Reserve U	3,025	2,865	3,039	3,043	2,387	2,180	2,344	2,236
88 U of Iowa	2,970	3,474	3,087	2,959	1,724	2,093	2,030	1,985
89 Carnegie Mellon U	2,928	2,964	3,142	3,016	2,303	2,513	2,849	2,317
90 Montana St U Bozeman	2,879	2,990	2,158	2,118	1,910	1,870	1,508	1,175
Total, 1st 90 institutions	609,434	592,299	579,364	572,175	441,022	425,149	409,435	407,382
91 University of Oregon	2,806	2,691	6,611	6,096	2,357	2,005	5,076	4,603
92 University of New Mexico	2,730	2,038	1,267	1,575	1,935	1,451	700	834
93 U of Missouri Rolla	2,708	2,526	2,272	1,567	645	582	687	631
94 SUNY Binghamton	2,698	1,890	1,700	1,442	1,137	841	617	697
95 U TX Dallas	2,694	2,170i	1,642	1,410	1,615	1,252i	888	568
96 Clemson University	2,583	3,097	2,588	2,652	856	1,073	815	786
97 Tulane University	2,549	2,427	2,042	1,516	1,615	1,202	1,016	584
98 University of Wyoming	2,532	2,120	1,721	1,133	1,352	1,089	893	775
99 U MA Lowell	2,515	2,394	2,069	1,710	2,133	1,680	1,193	966
100 University of Dayton	2,492	1,313	1,749	945	1,807	830	1,295	496
Total, 1st 100 institutions	635,741	614,965	603,025	592,221	456,474	437,154	422,615	418,322
Total, all other sampled insts.	142,018	139,388	140,405	148,000	87,966	86,774	86,352	86,850
Estimated total non-sampled insts.	23,226	17,497	15,815	0	15,818	12,319	11,061	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-53. Total and federally financed R&D expenditures in physics at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	990,096	981,402	950,678	940,490	759,915	759,286	725,341	708,166
1 MA Institute of Tech	74,821	77,461	78,155	77,908	67,327	71,657	66,072	63,646
2 Johns Hopkins Univ	74,032	74,694	79,841	78,624	72,852	73,633	78,852	77,277
3 California Inst of Tech	50,553	39,435	31,160	26,794	49,186	38,255	30,585	25,851
4 U CA Berkeley	38,998	35,132	35,680	38,129	31,842	30,275	30,867	34,037
5 U MD College Park	31,259	30,255	23,643	27,568	14,208	14,489	12,018	13,472
6 Cornell University	30,405	27,008	26,193	26,521	27,473	24,785	24,059	24,328
7 Michigan State University	21,864	19,708	17,521	21,168	14,112	13,054	9,557	9,863
8 U CA San Diego	19,636	10,157	11,238	11,811	18,025	9,437	9,773	10,352
9 University of Arizona	16,666	14,953	16,108	15,891	9,679	8,606	7,721	8,304
10 Indiana University	16,362	15,351	18,284	19,369	13,011	12,298	12,261	13,801
Total, 1st 10 institutions	374,596	344,154	337,823	343,783	317,715	296,489	281,765	280,931
11 SUNY Stony Brook	14,545	15,546	15,860	15,620	9,606	10,414	10,661	10,772
12 U WI Madison	13,867	14,075	15,314	15,299	11,151	11,696	12,299	12,805
13 Princeton University	12,237	12,092	12,502	12,522	9,593	10,183	10,136	9,672
14 U TX Austin	12,008	16,119	16,809	17,316	8,801	11,519	11,306	11,836
15 U of Pennsylvania	11,623	12,064	11,304	8,266	10,216	10,666	9,846	6,921
16 University of Michigan	11,415	12,459	13,715	19,166	8,122	7,994	8,977	9,138
17 Rutgers the State U NJ	10,873	11,110	10,596	11,356	4,147	4,251	4,117	4,229
18 U CA Los Angeles	10,775	12,892	11,648	10,930	9,825	11,701	10,198	9,915
19 U of Iowa	10,701	10,224	10,334	12,131	8,474	8,349	8,367	9,233
20 University of Colorado	10,527	11,035	10,129	10,170	8,362	8,044	7,830	8,002
Total, 1st 20 institutions	493,167	471,770	466,034	476,559	406,012	391,306	375,502	373,454
21 Harvard University	10,365	10,932	11,076e	9,990	9,583	10,259	9,790	8,448
22 U MA Amherst	10,342	7,003	5,530	5,123	7,704	4,977	3,826	3,527
23 Boston University	10,320	8,171	7,437	7,904	7,558	7,152	6,709	6,551
24 U CA Irvine	10,204	8,308	7,095	8,323	8,715	7,388	6,414	7,170
25 Georgia Institute of Tech	9,682	14,636	13,842	8,204	4,984	7,246	6,939	4,590
26 University of Chicago	9,365	10,205	8,440	8,130	8,696	9,014	8,080	7,719
27 Florida State University	9,326	14,413	14,074	9,143	4,349	8,709	8,828	5,506
28 Yale University	9,213	11,209	10,838	9,860	8,607	10,497	10,199	8,626
29 U of Washington	9,196	11,327	9,845	9,233	8,311	10,272	9,171	8,557
30 U of Illinois Urbana	9,055	9,866	9,570	11,364	7,165	8,047	8,015	9,212
Total, 1st 30 institutions	590,235	577,840	563,781	563,833	481,684	474,867	453,473	443,360
31 U CA Santa Barbara	8,819	9,668	8,865	10,906	7,699	8,547	8,031	9,669
32 NC State U Raleigh	8,790	8,014	5,992	5,635	4,592	4,494	4,804	4,227
33 Duke University	8,730	8,757	8,611	8,592	8,016	8,162	7,745	7,743
34 Ohio State University	8,509	8,207	8,140	8,101	5,503	5,152	5,178	5,094
35 Purdue University	8,165	9,405	9,013	7,817	5,378	6,212	5,320	5,521
36 Pennsylvania State U	7,988	7,659	5,127	4,765	5,354	5,213	3,100	2,823
37 U of Alaska Fairbanks	7,229i	7,939i	8,506i	8,021i	4,740i	5,820i	6,363i	6,494i
38 U of Tennessee System	6,872	7,981	8,639	8,286	4,254	4,666	5,144	4,966
39 University of Minnesota	6,416	5,865	6,990	8,450	5,604	5,029	6,199	6,662
40 Texas A&M University	6,097	8,641	9,297	7,505	3,544	4,342	4,429	4,389
Total, 1st 40 institutions	667,850	659,976	642,961	641,911	536,368	532,504	509,786	500,948
41 Louisiana St U, All Camp	5,838	5,934	4,968	5,466	3,539	3,445	3,399	3,504
42 University of Virginia	5,502	5,835	6,712	6,723	4,526	4,548	5,086	4,762
43 Vanderbilt University	5,417	5,218	6,022	5,788	5,041	4,907	5,135	4,884
44 U CA Santa Cruz	5,353	3,707	4,209	3,629	4,333	3,401	3,181	3,315
45 U of Alabama Huntsville	5,302	4,795	4,088	5,181	3,944	3,138	2,965	4,311
46 University of Rochester	5,207	5,635	5,376	6,157	4,991	5,480	5,185	5,567
47 University of Florida	5,071	4,917	4,663	4,411	2,421	2,087	2,009	2,113
48 Brown University	5,045	4,904	4,294	4,549	3,084	3,079	2,493	2,818
49 Arizona State University	5,033	4,585	4,198	4,784	3,754	3,513	3,605	3,181
50 Stanford University	4,855	4,016	3,322	3,853	4,561	3,760	3,100	3,523
Total, 1st 50 institutions	720,473	709,522	690,813	692,452	576,562	569,862	545,944	538,926

See explanatory information and SOURCE at end of table.

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Table B-53. Total and federally financed R&D expenditures in physics at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 U of Central Florida	4,666	7,626	6,234	122	4,326	4,620	3,336	102
52 Alabama A&M University	4,627i	4,458	5,152	4,245	4,168i	4,013	4,639	3,450
53 Wayne State University	4,587	5,029	4,593	3,710	997	1,294	1,299	1,205
54 Washington University	4,512	4,401	4,144	3,866	3,138	3,153	3,192	3,141
55 Carnegie Mellon U	4,506	4,242	3,920	3,614	3,705	3,445	3,550	3,218
56 University of Oregon	4,499	4,252	5,512	6,001	3,576	3,369	3,460	3,425
57 Illinois Inst of Tech	4,495	1,128	731	842	1,551	224	201	369
58 CUNY City College	4,425	4,012	3,233	3,772	3,440	3,185	2,641	2,215
59 Northwestern University	4,352	4,296	4,254	3,962	3,411	3,513	3,514	3,276
60 Montana St U Bozeman	4,344	2,633	1,699	1,705	2,244	1,595	1,385	1,131
Total, 1st 60 institutions	765,486	751,599	730,285	724,291	607,118	598,273	573,161	560,458
61 U TX Dallas	3,819	3,901i	3,980	5,860	977	2,352i	3,724	5,051
62 Oklahoma State University	3,807	3,522	3,571	4,019	989	1,099	957	961
63 Iowa State University	3,789	4,109	3,110	2,389	2,449	2,785	1,904	1,654
64 Kansas State University	3,772	3,914	3,186	2,590	3,451	3,583	2,944	2,354
65 University of Pittsburgh	3,682	4,411	4,681	4,582	3,212	3,721	3,966	3,913
66 University of New Mexico	3,527	3,310	3,135	2,815	2,572	2,386	1,697	1,873
67 University of Notre Dame	3,502	4,131	3,871	4,533	2,844	3,157	2,770	3,190
68 U CA Davis	3,481	5,949	4,742	5,504	3,117	5,223	4,194	4,569
69 University of Houston	3,470	3,098	2,812	3,440	1,903	1,656	1,544	1,718
70 Syracuse University	3,416	2,411	3,737	3,182	2,263	1,990	1,987	2,160
Total, 1st 70 institutions	801,751	790,355	767,110	763,205	630,895	626,225	598,848	587,901
71 U of South Carolina	3,384	2,299	2,389	1,724	2,584	1,684	1,832	1,455
72 University of Georgia	3,269	3,519	3,096	2,500	1,191	1,212	1,045	932
73 U of Southern California	3,196	3,164	2,192	1,618	2,717	2,655	1,925	1,486
74 Oregon Grad Inst Sci Tech	3,181	2,752	2,727	2,545	1,156	1,325	1,375	921
75 University of Utah	3,141	2,906	3,041	3,390	2,863	2,589	2,688	3,126
76 Utah State University	3,141	3,813	3,231	4,221	2,484	3,247	2,599	3,657
77 SUNY Albany	2,954	2,333	2,220	1,101	761	611	564	532
78 University of IL Chicago	2,934	3,504	3,836	4,539	1,630	1,988	2,416	2,977
79 U MA Lowell	2,911	2,914	3,350	2,854	2,493	2,407	2,743	2,155
80 Col of William & Mary	2,906	2,624	2,788	2,879	2,447	2,316	2,726	2,491
Total, 1st 80 institutions	832,768	820,183	795,980	790,576	651,221	646,259	618,761	607,633
81 U Mississippi, All Camp	2,782	3,019	3,347	3,751	2,231	2,279	2,620	2,821
82 Clark Atlanta University	2,780	2,949	1,310	1,248	2,233	2,890	1,256	1,196
83 University of Oklahoma	2,633	2,304	3,705	2,663	1,318	1,328	1,647	1,010
84 Clemson University	2,629	3,426	2,788	2,303	871	1,188	879	683
85 Washington State U	2,616	2,907	2,612	2,056	2,235	2,089	2,019	1,465
86 Columbia University	2,611	3,190	2,695	1,869	2,360	2,952	2,615	1,864
87 VA Polytech Inst & St U	2,568	2,423	2,344	2,258	1,611	1,575	1,639	1,497
88 US Naval Postgrad School	2,547i	2,232	1,986	2,419	2,377i	2,160	1,930	2,082
89 U TX MD Anderson Cncr	2,538	3,009	3,112	2,824	1,858	2,287	2,410	2,080
90 Case Western Reserve U	2,406	3,619	2,363	2,177	1,676	3,078	1,718	1,526
Total, 1st 90 institutions	858,878	849,261	822,242	814,144	669,991	668,085	637,494	623,857
91 Rice University	2,398	2,610	2,466	2,572	2,197	2,369	2,090	1,934
92 U CA Riverside	2,351	1,227	3,185	2,110	2,317	1,207	3,009	1,983
93 U of NC Chapel Hill	2,268	2,275	2,157	1,976	1,490	1,407	1,264	1,090
94 The Rockefeller Univ	2,189	2,975	2,146	2,371	1,165	1,145	1,200	1,367
95 Colorado State University	2,176	1,629	1,889	1,230	1,672	1,271	1,492	871
96 U of Nebraska Lincoln	2,175	2,737	2,604	2,944	1,663	2,253	2,006	1,645
97 Florida A&M University	2,106	2,131	2,261	1,404i	2,063	2,120	2,132	1,372i
98 Rensselaer Polytech Inst	2,101	2,732	2,883	2,385	1,401	1,820	1,794	1,194
99 U Arkansas Main	2,030	1,322	853	2,222	1,000	614	284	766
100 Univ of Hawaii Manoa	1,991	2,120	3,412	2,931	1,591	1,788	3,162	2,606
Total, 1st 100 institutions	880,663	871,019	846,098	836,289	686,550	684,079	655,927	638,685
Total, all other sampled insts	99,379	102,382	97,467	104,201	67,023	68,789	63,323	69,481
Estimated total non-sampled insts	10,054	8,001	7,113	0	6,342	6,418	6,091	0

NOTE: Because of rounding, detail may not add to totals

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-54. R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Atmospheric	Earth sciences	Oceanography	Other
Total, all institutions	1,477,873	1,444,456	1,407,449	1,316,946	225,404	452,797	517,826	281,846
1 U CA San Diego	109,260	109,375	102,266	78,807	5,066	0	104,194	0
2 Texas A&M University	71,841	85,163	80,878	74,688	2,395	4,533	60,523	4,390
3 Woods Hole Oceanograph	58,702	62,692	63,974	64,520	4,227i	19,508i	15,251i	19,716i
4 U of Washington	58,398	54,040	57,912	55,031	10,544	7,683	40,171	0
5 University of Colorado	40,719	42,165	36,036	32,086	22,215	16,203	1,295	1,006
6 Columbia University	37,387	40,329	39,786	28,472	0	0	0	37,387
7 U of Alaska Fairbanks	32,044i	33,732i	35,838i	32,623i	1,129i	12,277i	18,525i	113i
8 VA Polytech Inst & St U	31,786	35,163	32,781	20,434	0	3,816	0	27,970
9 Johns Hopkins Univ	30,178	32,787	40,593	43,880	6,588i	2,170i	10,521i	10,899i
10 University of Miami	28,375	27,731	25,528	22,848	13,768	172	13,178	1,257
Total, 1st 10 institutions	498,690	523,177	515,592	453,389	65,932	66,362	263,658	102,738
11 U of Illinois Urbana	27,238	26,859	27,052	27,791	2,235	22,051	0	2,952
12 U TX Austin	26,030	23,689	25,826	27,457	0	16,135	9,895	0
13 Oregon State University	24,779	26,326	25,740	25,240	1,242	1,138	19,192	3,207
14 U of New Hampshire	24,692	20,901	23,016	20,840	10,054	1,606	1,037	11,995
15 U WI Madison	23,908	24,423	21,898	24,004	14,206	2,722	2,883	4,097
16 Pennsylvania State U	23,222	25,267	21,360	18,477	9,603	8,060	0	5,559
17 Louisiana St U, All Camp	23,221	22,694	20,537	19,076	0	5,092	15,304	2,825
18 University of Michigan	22,940	21,330	20,823	23,999	12,140	4,146	2,583	4,071
19 U of Rhode Island	22,249i	22,518i	22,534i	22,227i	1,984i	163i	20,102i	0i
20 U MD Center for EES	21,448	21,100	19,817	19,055	0	1,460	19,988	0
Total, 1st 20 institutions	738,417	758,284	744,195	681,555	117,396	128,935	354,642	137,444
21 SUNY Stony Brook	17,501	16,603	15,931	15,463	1,866	5,586	10,049	0
22 University of Oklahoma	16,832	13,088	12,655	11,921	11,204	5,628	0	0
23 Col of William & Mary	16,700	12,438	13,723	14,944	0	133	16,567	0
24 California Inst of Tech	15,444	14,402	14,850	12,870	0	14,433	0	1,011
25 U CA Los Angeles	15,086	15,080	14,130	14,196	4,109	10,977	0	0
26 Florida State University	14,683	11,507	11,752	10,178	5,549	1,653	5,306	2,175
27 MA Institute of Tech	14,361	14,251	16,094	14,666	287	11,920	2,154	0
28 Desert Research Institute	13,500	15,768	14,122	14,680	2,400	5,600	0	5,500
29 Rutgers the State U NJ	13,296	12,368	9,898	8,434	590	579	5,310	6,817
30 U of Tennessee System	13,086	14,591	13,069	13,801	0	1,553	0	11,533
Total, 1st 30 institutions	888,906	898,380	880,419	812,708	143,401	186,997	394,028	164,480
31 U of Southern California	13,067	12,997	11,591	14,596	0	9,307	2,333	1,427
32 Utah State University	12,990	8,435	10,239	12,116	7,746	5,244	0	0
33 Colorado State University	12,853	12,554	11,432	11,427	11,916	937	0	0
34 Georgia Institute of Tech	12,696	8,617	9,459	7,640	793	11,900	0	3
35 U CA Santa Barbara	12,405	10,538	9,789	10,085	0	2,298	9,979	128
36 NC State U Raleigh	11,818	11,825	9,651	8,945	0	0	5,368	6,450
37 U of South Florida	11,631	17,144	8,835	6,772	0	883	10,736	12
38 Harvard University	11,595	10,164	9,714e	9,054	0	11,595	0	0
39 U CA Santa Cruz	11,504	9,921	9,443	7,805	0	4,065	7,434	5
40 University of Minnesota	10,447	10,014	11,560	13,185	0	5,629	223	4,595
Total, 1st 40 institutions	1,009,912	1,010,589	982,132	914,333	163,856	238,855	430,101	177,100
41 U MD College Park	10,426	9,624	8,932	12,858	7,811	1,351	0	1,264
42 Stanford University	9,906	7,772	6,192	5,761	0	8,276	1,630	0
43 University of Georgia	9,885	9,186	8,426	7,187	0	3,930	5,955	0
44 Ohio State University	9,878	8,627	7,644	6,756	0	5,199	0	4,679
45 NJ Inst of Technology	9,540	7,298	7,683	8,007	0	0	0	9,540
46 U of NC Chapel Hill	9,516	10,289	11,413	9,893	0	6,395	3,121	0
47 University of Kansas	9,360	8,422	7,742	8,026	0	9,111	0	249
48 University of Arizona	9,156	8,867	20,861	20,633	3,560	5,596	0	0
49 Clark Atlanta University	9,020	9,013	135	125	155	34	119	8,712
50 Princeton University	8,871	8,042	8,190	8,083	3,417	5,269	0	185
Total, 1st 50 institutions	1,105,470	1,097,729	1,069,350	1,001,662	178,799	284,016	440,926	201,729

See explanatory information and SOURCE at end of table.

Table B-54. R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Atmospheric	Earth sciences	Oceanography	Other
51 U of Nebraska Lincoln	8,775	7,699	5,151	4,186	3,498	5,277	0	0
52 U of South Carolina	8,704	13,804	13,591	12,276	29	5,579	2,766	330
53 University of Wyoming	8,640	9,355	8,460	7,855	2,989	3,931	0	1,720
54 University of Connecticut	8,516	8,383	7,614	7,387	0	415	8,101	0
55 University of Delaware	8,205	7,912	7,154	7,034	0	777	7,428	0
56 Univ of Hawaii Manoa	8,135	8,207	8,141	10,262	0	5,417	1,376	1,342
57 Rice University	8,016	4,904	3,671	2,794	0	1,572	0	6,444
58 U of Nevada Reno	7,522	4,922	4,089	5,181	209	5,500	0	1,813
59 Arizona State University	7,166	7,156	3,446	3,836	0	7,128	0	38
60 West Virginia University	6,879	6,636	7,320	6,571	0	404	0	6,475
Total, 1st 60 institutions	1,186,028	1,176,707	1,137,987	1,069,044	185,524	320,016	460,597	219,891
61 SUNY Albany	6,741	5,775	6,776	7,274	6,741	0	0	0
62 U of Alabama Huntsville	6,246	7,121	4,875	2,819	6,246	0	0	0
63 U MD Biotechnology Inst	6,157	5,281	4,355	--	0	0	6,157	0
64 U of Maine	6,122	6,864	6,920	4,712	0	2,010	4,110	2
65 New Mexico State Univ	6,046	7,378	9,585	10,719	2,975	881	0	2,190
66 U MA Amherst	6,042	5,735	6,386	6,383	0	4,275	0	1,767
67 U CA Davis	5,633	1,492	1,331	1,490	0	1,025	0	4,608
68 U of Nevada Las Vegas	5,611i	5,625	8,237	11,234	0i	564i	0i	5,047i
69 Old Dominion University	5,559	5,135	5,061	5,173	0	144	2,623	2,792
70 Brown University	5,341	4,877	5,202	4,858	0	5,341	0	0
Total, 1st 70 institutions	1,245,526	1,231,990	1,196,715	1,123,706	201,486	334,256	473,487	236,297
71 U CA Berkeley	5,232	4,809	4,466	4,888	0	5,183	0	49
72 US Naval Postgrad School	5,068i	4,510	4,157	3,916	2,415i	0i	2,653i	0i
73 University of Chicago	4,790	5,198	4,592	3,943	53	4,530	0	207
74 U PR Mayaguez	4,707	2,439	3,062	2,765	411	560	3,736	0
75 University of Virginia	4,581	4,567	4,807	4,378	3,992	6	0	583
76 U CA Riverside	4,259	2,422	3,162	1,673	0	4,259	0	0
77 Purdue University	4,175	2,218	2,081	2,221	1,663	895	0	1,617
78 Sam Houston State U	4,173	2,591i	1,002	142	0	4,173	0	0
79 Cornell University	3,858	4,431	4,389	5,359	0	2,860	0	998
80 University of Utah	3,820	4,255	4,870	3,672	1,692	2,128	0	0
Total, 1st 80 institutions	1,290,189	1,269,430	1,233,303	1,156,663	211,712	358,850	479,876	239,751
81 NM Inst Mining & Tech	3,709	3,829	3,845	4,606	0	2,812	0	897
82 Oregon Grad Inst Sci Tech	3,388	3,128	3,631	3,590	684	0	0	2,704
83 U TX El Paso	3,382	2,749	1,604	1,160	0	3,382	0	0
84 The University of Memphis	3,379	2,950	2,738	2,773	0	3,379	0	0
85 U WI Milwaukee	3,301	3,222	2,987	2,720	0	397	2,816	88
86 Washington University	3,167	3,302	3,505	3,439	0	3,167	0	0
87 University of Florida	3,163	3,055	2,381	1,706	0	881	2,276	6
88 Duke University	2,970	2,962	3,300	4,024	0	1,206	1,764	0
89 Tarleton State University	2,923	2,425	2,661	2,766	0	2,889	0	34
90 SD Sch of Mines & Tech	2,911	3,024	2,622	2,331	2,911	0	0	0
Total, 1st 90 institutions	1,322,482	1,300,076	1,262,577	1,185,778	215,307	376,963	486,732	243,480
91 Mississippi State U	2,900	2,940	3,587	2,833	0	18	0	2,882
92 University of Idaho	2,814	2,511	2,675	2,794	0	2,087	0	727
93 U Arkansas Main	2,729	2,396	1,915	1,188	0	2,729	0	0
94 Southern Methodist U	2,682	1,834	2,312	2,223	0	2,682	0	0
95 Florida A&M University	2,608	1,880	0	0i	0	0	0	2,608
96 SUNY Col Env Sci Frstry	2,265i	2,251i	2,239	2,187	1,248i	175i	397i	445i
97 Yale University	2,251	1,820	2,245	2,314	675	1,486	90	0
98 University of New Mexico	2,193	1,918	2,267	1,987	553	1,640	0	0
99 Michigan Tech University	2,183	1,894	1,279	637i	5	2,029	75	74
100 Carnegie Mellon U	2,164	1,828	1,711	2,424	0	0	0	2,164
Total, 1st 100 institutions	1,347,271	1,321,348	1,282,807	1,204,365	217,788	389,809	487,294	252,380
Total, all other sampled insts	85,257	82,835	85,683	112,581	4,255	45,290	10,559	25,153
Estimated total non-sampled insts	45,345	40,273	38,959	0	3,361	17,698	19,973	4,313

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-55. Federally financed R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Atmospheric	Earth sciences	Oceanography	Other
Total, all institutions	993,769	966,290	948,940	869,006	177,803	268,512	362,670	184,784
1 U CA San Diego	83,625	85,462	81,240	57,152	3,861	0	79,764	0
2 U of Washington	55,434	51,187	55,009	50,789	10,186	7,111	38,137	0
3 Texas A&M University	54,241	60,580	62,565	57,072	1,918	1,137	48,503	2,683
4 Woods Hole Oceanograph	50,334	56,995	58,138	57,698	3,423	17,627	12,787	16,497
5 Columbia University	34,634	38,525	38,467	28,197	0	0	0	34,634
6 University of Colorado	32,039	30,111	26,785	24,097	18,158	12,599	386	896
7 VA Polytech Inst & St U	29,860	32,322	28,812	16,147	0	1,890	0	27,970
8 Johns Hopkins Univ	29,088	31,712	39,196	42,196	6,581	2,072	10,521	9,914
9 University of Miami	23,795	23,740	22,716	20,158	12,157	138	10,455	1,045
10 Oregon State University	23,016	21,968	21,983	20,603	1,225	753	18,057	2,981
Total, 1st 10 institutions	416,066	432,602	434,911	374,109	57,509	43,327	218,610	96,620
11 U of Rhode Island	21,544	20,755	19,574	19,326	1,923	143	19,478	0
12 University of Michigan	17,551	15,456	15,770	16,624	10,798	2,520	1,989	2,244
13 U of Alaska Fairbanks	17,114	21,022	22,985	23,461	1,129	8,121	7,829	35
14 U WI Madison	16,228	16,840	15,148	16,554	11,684	1,581	785	2,178
15 U of New Hampshire	15,206	12,517	15,716	14,041	5,494	1,279	720	7,713
16 California Inst of Tech	14,065	12,858	13,481	12,123	0	14,010	0	55
17 Pennsylvania State U	13,128	15,267	11,742	10,287	7,132	4,153	0	1,843
18 SUNY Stony Brook	11,468	9,429	9,836	8,830	1,518	3,615	6,335	0
19 MA Institute of Tech	10,993	10,306	12,353	11,829	220	9,124	1,649	0
20 U of Southern California	10,695	10,472	8,749	10,738	0	8,140	1,646	909
Total, 1st 20 institutions	564,058	577,524	580,265	517,922	97,407	96,013	259,041	111,597
21 Colorado State University	10,331	10,081	8,959	10,608	9,592	739	0	0
22 U TX Austin	10,274	10,228	9,932	11,820	0	5,075	5,199	0
23 U CA Los Angeles	9,948	9,790	9,337	9,457	3,943	6,005	0	0
24 Florida State University	9,084	6,184	5,946	6,731	3,853	695	3,099	1,437
25 U CA Santa Barbara	8,987	7,590	6,959	7,145	0	1,629	7,358	0
26 Utah State University	8,880	4,064	5,541	8,242	7,261	1,619	0	0
27 Desert Research Institute	8,600	10,066	9,599	10,539	2,200	4,600	0	1,800
28 Harvard University	8,452	7,383	6,754	6,631	0	8,452	0	0
29 U of Tennessee System	8,343	9,615	8,682	10,232	0	1,021	0	7,322
30 U CA Santa Cruz	8,231	7,765	6,005	5,496	0	3,200	5,030	1
Total, 1st 30 institutions	655,188	660,290	657,979	604,823	124,256	129,048	279,727	122,157
31 U of South Florida	8,212	11,426	5,476	3,525	0	392	7,820	0
32 Stanford University	8,042	6,299	5,085	4,745	0	6,729	1,313	0
33 Louisiana St U, All Camp	7,585	7,280	7,308	7,085	0	1,107	6,037	441
34 Col of William & Mary	7,286	6,392	5,831	5,998	0	95	7,191	0
35 University of Oklahoma	7,149	6,137	4,702	4,348	6,134	1,015	0	0
36 Rice University	7,127	3,609	2,759	1,497	0	1,434	0	5,693
37 U MD College Park	6,853	6,276	5,511	7,076	5,269	927	0	657
38 Arizona State University	6,748	6,770	3,158	3,500	0	6,748	0	0
39 U of Illinois Urbana	6,658	7,317	8,227	8,295	1,720	3,961	0	977
40 Ohio State University	6,641	5,127	4,860	4,378	0	2,919	0	3,722
Total, 1st 40 institutions	727,489	726,923	710,896	655,270	137,379	154,375	302,088	133,647
41 Georgia Institute of Tech	6,536	4,266	4,742	4,274	408	6,126	0	2
42 U of Nebraska Lincoln	6,328	5,131	3,433	1,361	2,197	4,131	0	0
43 U of NC Chapel Hill	6,299	6,183	6,654	5,649	0	4,848	1,451	0
44 NC State U Raleigh	6,164	5,173	4,638	4,537	0	0	2,124	4,040
45 Clark Atlanta University	6,072	883	117	112	116	18	97	5,841
46 University of Delaware	6,043	5,323	4,927	4,939	0	572	5,471	0
47 U of South Carolina	6,033	5,472	3,456	4,040	0	4,056	1,700	277
48 U MD Center for EES	5,998	5,952	5,452	5,413	0	200	5,798	0
49 Princeton University	5,696	4,961	4,837	4,782	2,903	2,640	0	153
50 U of Alabama Huntsville	5,274	6,207	3,958	2,144	5,274	0	0	0
Total, 1st 50 institutions	787,932	776,474	753,110	692,521	148,277	176,966	318,729	143,960

See explanatory information and SOURCE at end of table.

Table B-55. Federally financed R&D expenditures in the environmental sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Atmospheric	Earth sciences	Oceanography	Other
51 West Virginia University	5,196	5,080	5,896	4,956	0	235	0	4,961
52 Rutgers the State U NJ	4,946	4,425	4,110	2,323	241	498	3,661	546
53 US Naval Postgrad School	4,866i	4,424	4,061	3,757	2,332i	0i	2,534i	0i
54 University of Arizona	4,837	4,505	7,815	7,266	1,657	3,180	0	0
55 NJ Inst of Technology	4,610	3,053	2,535	1,696	0	0	0	4,610
56 University of Minnesota	4,486	3,897	4,745	4,508	0	2,975	222	1,289
57 U PR Mayaguez	4,424	1,883	2,217	1,454	411	444	3,569	0
58 U of Nevada Las Vegas	4,153i	3,899	4,344	6,973	0i	194i	0i	3,959i
59 Univ of Hawaii Manoa	4,108	4,270	5,169	7,330	0	2,978	953	177
60 University of Chicago	3,999	4,598	4,205	3,794	52	3,947	0	0
Total, 1st 60 institutions	833,557	816,508	798,207	736,578	152,970	191,417	329,668	159,502
61 U of Nevada Reno	3,967	4,363	3,659	3,300	194	3,629	0	144
62 University of Wyoming	3,933	3,926	3,638	3,657	2,371	1,346	0	216
63 New Mexico State Univ	3,904	5,611	8,262	9,360	2,688	216	0	1,000
64 Brown University	3,869	3,689	4,275	3,976	0	3,869	0	0
65 Sam Houston State U	3,800	2,344i	882	40	0	3,800	0	0
66 U CA Davis	3,528	1,392	1,106	1,287	0	792	0	2,736
67 U of Maine	3,524	3,481	4,223	2,490	0	952	2,572	0
68 University of Connecticut	3,425	3,652	3,771	3,803	0	303	3,122	0
69 U MD Biotechnology Inst	3,423	2,966	2,554	--	0	0	3,423	0
70 SUNY Albany	3,324	3,284	3,467	3,966	3,324	0	0	0
Total, 1st 70 institutions	870,254	851,216	834,044	768,457	161,547	206,324	338,785	163,598
71 University of Virginia	3,134	3,717	3,664	3,306	3,134	0	0	0
72 U CA Berkeley	3,043	3,120	2,861	2,978	0	3,038	0	5
73 University of Georgia	2,888	2,673	2,063	1,854	0	771	2,117	0
74 Purdue University	2,840	1,402	1,460	1,480	1,100	593	0	1,147
75 University of Utah	2,835	3,071	3,514	2,693	1,657	1,178	0	0
76 U TX El Paso	2,680	2,098	1,087	895	0	2,680	0	0
77 Washington University	2,666	2,532	2,532	1,971	0	2,666	0	0
78 Mississippi State U	2,496	2,496	3,050	2,387	0	18	0	2,478
79 Southern Methodist U	2,489	1,419	2,138	2,038	0	2,489	0	0
80 U CA Riverside	2,425	1,481	2,178	944	0	2,425	0	0
Total, 1st 80 institutions	897,750	875,225	858,591	789,003	167,438	222,182	340,902	167,228
81 U MA Amherst	2,373	2,189	2,102	2,092	0	1,838	0	535
82 Cornell University	2,366	2,726	2,407	3,648	0	2,065	0	301
83 Florida A&M University	2,361	1,572	0	0i	0	0	0	2,361
84 University of Kansas	2,275	1,144	888	969	0	2,132	0	143
85 SD Sch of Mines & Tech	2,186	2,526	2,142	1,915	2,186	0	0	0
86 Duke University	2,057	2,262	2,435	2,837	0	1,040	1,017	0
87 U Southern Mississippi	2,024	1,405	927	843	0	363	1,072	589
88 Old Dominion University	1,858	1,324	984	809	0	48	1,779	31
89 Yale University	1,836	1,527	1,878	1,762	551	1,212	73	0
90 U CA Irvine	1,788	1,349	772	24	0	0	0	1,788
Total, 1st 90 institutions	918,874	893,249	873,126	803,902	170,175	230,880	344,843	172,976
91 Michigan Tech University	1,667	1,183	799	482i	5	1,604	58	0
92 University of New Mexico	1,590	1,563	1,560	1,258	418	1,172	0	0
93 University of Oregon	1,565	1,158	1,047	951	0	897	530	138
94 U WI Milwaukee	1,435	1,263	1,260	1,016	0	268	1,167	0
95 Oregon Grad Inst Sci Tech	1,429	1,150	1,425	1,655	654	0	0	775
96 NM Inst Mining & Tech	1,323	1,274	1,185	1,063	0	1,320	0	3
97 Portland State University	1,266	1,403	1,346	1,128	170	9	1,049	38
98 University of Florida	1,134	1,231	1,648	714	0	401	733	0
99 Lehigh University	1,054	934	852	628	0	1,054	0	0
100 The University of Memphis	1,051	1,031	978	766	0	1,051	0	0
Total, 1st 100 institutions	932,388	905,439	885,226	813,563	171,422	238,656	348,380	173,930
Total, all other sampled insts.	39,151	39,906	42,705	55,443	3,108	22,684	2,876	10,483
Estimated total non-sampled insts.	22,230	20,945	21,009	0	3,273	7,172	11,414	371

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-56. Total and federally financed R&D expenditures in the mathematical sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	288,988	280,359	282,259	272,155	209,363	205,454	205,698	203,039
1 Johns Hopkins Univ	38,508	37,420	37,323	34,459	38,447	37,382	37,292	34,431
2 George Washington U	7,205	6,080	6,032	6,856	6,529	5,721	5,449	6,548
3 U of South Carolina	7,088	5,842	5,849	3,528	3,660	2,695	4,664	2,601
4 Rutgers the State U NJ	6,803	7,294	7,033	7,482	3,064	3,412	3,354	3,989
5 University of Minnesota	6,676	6,158	6,110	5,865	5,960	5,206	5,488	5,280
6 Boston College	6,675	6,354	5,333	6,135	5,744	5,078	3,792	4,519
7 Iowa State University	6,469	5,203	4,899	5,083	3,026	2,024	1,668	1,701
8 Brown University	6,033	6,033	4,665	4,582	3,938	4,126	3,109	3,136
9 NC State U Raleigh	5,798	4,431	4,391	3,884	2,669	2,168	1,901	1,519
10 U CA Berkeley	4,832	4,962	3,849	5,299	4,471	4,684	3,624	4,992
Total, 1st 10 institutions	96,087	89,777	85,484	83,173	77,508	72,496	70,341	68,716
11 Georgia Institute of Tech	4,155	2,956	2,910	3,245	2,139	1,464	1,459	1,816
12 SUNY Stony Brook	4,119	4,150	4,442	3,825	2,641	2,547	2,816	2,372
13 US Naval Postgrad School	3,882	3,511	4,072	3,702	3,845	3,495	4,072	3,692
14 MA Institute of Tech	3,880	2,727	4,625	6,681	3,200	2,463	4,152	5,978
15 Purdue University	3,788	3,737	3,498	3,252	2,020	2,042	2,050	2,083
16 University of Georgia	3,750	3,424	2,552	2,301	581	553	407	342
17 U TX Austin	3,471	2,398	1,903	1,196	895	1,790	1,110	791
18 University of Michigan	3,399	2,785	2,586	2,187	1,730	1,980	1,842	2,177
19 New York University	3,310	3,602	4,735	3,143	3,167	3,403	3,571	2,825
20 U CA Los Angeles	3,213	4,059	3,652	3,675	3,145	3,932	3,428	3,475
Total, 1st 20 institutions	133,054	123,126	120,459	116,380	100,871	96,165	95,248	94,267
21 Carnegie Mellon U	3,179	2,724	2,923	2,861	2,540	2,190	2,416	2,147
22 U WI Madison	3,061	3,027	3,398	3,476	2,060	2,067	2,298	2,385
23 University of IL Chicago	2,981	1,725	2,481	2,415	2,135	1,090	1,833	1,827
24 Cornell University	2,942	3,031	3,537	3,599	2,656	2,668	2,830	3,166
25 University of Arizona	2,897	3,818	2,836	2,084	2,151	2,783	2,021	1,525
26 Stanford University	2,746	2,825	2,906	3,287	2,512	2,730	2,752	3,072
27 U of Washington	2,627	2,774	2,641	2,575	2,440	2,432	2,338	2,319
28 Boston University	2,612	2,350	2,406	2,798	2,521	2,318	2,374	2,774
29 The University of Montana	2,608	2,301	2,601	1,817	2,553	2,014	2,270	1,562
30 Princeton University	2,588	3,760	5,254	5,205	1,552	2,839	4,411	4,228
Total, 1st 30 institutions	161,295	151,461	151,442	146,497	123,991	119,296	120,791	119,272
31 Pennsylvania State U	2,576	2,338	2,270	2,806	1,836	1,447	1,625	1,855
32 U TX MD Anderson Cncr	2,559	2,449	2,096	2,653	227	219	434	1,013
33 VA Polytech Inst & St U	2,474	2,476	2,467	1,675	1,374	1,311	1,344	774
34 Clemson University	2,424	1,715	1,936	2,434	803	595	610	721
35 University of Florida	2,377	2,539	2,650	2,763	2,190	1,841	1,783	1,943
36 Rice University	2,335	1,929	2,227	2,337	1,760	1,153	1,821	1,841
37 University of Colorado	2,149	2,339	4,921	1,601	1,751	1,715	1,496	1,343
38 Michigan State University	2,085	2,286	2,411	2,630	1,540	1,737	1,676	1,225
39 Colorado School of Mines	2,022	1,412	803	925	529	376	224	400
40 Western Michigan U	1,907	1,704	1,767	889	1,171	1,007	1,177	617
Total, 1st 40 institutions	184,203	172,648	174,990	167,210	137,172	130,697	132,981	131,004
41 U of Southern California	1,868	1,613	1,651	2,139	1,657	1,351	1,477	2,012
42 U of Illinois Urbana	1,832	1,590	1,509	1,816	973	809	916	1,163
43 U MD College Park	1,801	2,023	5,809	5,294	944	1,305	1,408	1,508
44 U MA Amherst	1,791	2,159	2,140	2,275	1,366	1,572	1,702	1,759
45 U CA Santa Barbara	1,652	1,373	1,166	1,409	1,143	971	773	816
46 Ohio State University	1,617	2,516	2,606	3,083	1,348	1,907	2,057	2,416
47 Colorado State University	1,592	1,880	946	970	545	708	377	401
48 Texas A&M University	1,570	1,850	2,852	1,370	1,156	1,169	2,140	1,093
49 University of Chicago	1,558	1,807	2,204	2,216	1,444	1,664	2,114	2,115
50 Louisiana St U, All Camp	1,536	1,429	1,181	1,171	421	451	182	199
Total, 1st 50 institutions	201,020	190,888	197,054	188,953	148,169	142,604	146,127	144,486

See explanatory information and SOURCE at end of table.

Table B-56. Total and federally financed R&D expenditures in the mathematical sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 University of Houston	1,525	1,786	925	1,725	980	1,237	626	1,254
52 Harvard University	1,489	2,293	2,418e	2,130	1,299	2,221	2,170	2,035
53 U of the Virgin Islands	1,477	783i	92	1,817	0	45i	92	367
54 U of Pennsylvania	1,455	1,257	1,537	1,253	1,422	1,230	1,289	1,166
55 Arizona State University	1,453	1,169	859	953	918	758	630	618
56 Rensselaer Polytech Inst	1,415	1,126	1,188	1,334	946	756	723	668
57 Northwestern University	1,409	966	673	764	915	871	582	702
58 Indiana University	1,400	1,498	1,544	1,842	1,035	1,170	839	1,119
59 University of New Mexico	1,391	1,528	792	705	1,263	1,426	635	575
60 Oklahoma State University	1,371	1,232	665	389	484	540	252	199
Total, 1st 60 institutions	215,405	204,526	207,747	201,865	157,431	152,858	153,965	153,189
61 Yale University	1,365	1,688	1,864	1,908	1,247	1,584	1,739	1,560
62 University of Utah	1,265	1,232	1,539	1,321	1,241	1,183	1,426	1,302
63 U of Tennessee System	1,257	1,529	1,230	966	769	1,064	790	638
64 U of Alabama Huntsville	1,231	1,095	1,152	1,160	712	674	692	734
65 U CA San Diego	1,227	1,968	1,960	1,819	1,190	1,918	1,910	1,769
66 U MA Dartmouth	1,082	1,099	681	208	1,074	1,078	668	1
67 Oregon State University	1,079	890	1,192	1,487	317	621	780	1,060
68 Duke University	1,039	826	868	992	883	749	801	899
69 U of NC Chapel Hill	1,015	957	1,435	991	1,004	931	1,398	929
70 Emory University	1,003	632	451	296	766	482	379	260
Total, 1st 70 institutions	226,968	216,442	220,119	213,013	166,634	163,142	164,548	162,341
71 U of Missouri Columbia	972	880	682	530	379	379	283	236
72 Air Force Inst of Tech	875	1,079	898	122	260	318	147	122
73 Florida State University	848	884	1,012	1,122	660	653	650	923
74 Tufts University	847	104	191	171e	650	76	139	143
75 Clark Atlanta University	840	313	936	883	683	313	862	814
76 Hampton University	836	1,146	448	496	836	1,146	448	496
77 George Mason University	815	1,085	991	1,241	685	882	831	1,085
78 Jackson State University	785	391i	0	14	707	353i	0	14
79 Washington University	773	1,100	1,238	1,109	725	993	1,100	1,027
80 Loyola U of Chicago	771	1,360i	1,950	959	568	1,029i	1,490	824
Total, 1st 80 institutions	235,330	224,784	228,465	219,660	172,787	169,284	170,498	168,025
81 Illinois State University	762	960	989	428	664	850	906	369
82 Montana St U Bozeman	759	846	440	227	252	388	306	227e
83 University of Wyoming	759	1,415	390	184	325	1,107	231	95
84 San Diego St University	750	315	413	421	169	144	147	242
85 University of Virginia	749	706	1,323	1,390	666	587	1,094	1,033
86 University of Pittsburgh	735	901	760	805	564	673	621	659
87 University of Delaware	728	601	625	612	666	514	523	518
88 Columbia University	718	747	714	699	637	676	664	669
89 Northeastern University	711	444	341	646	374	417	341	645
90 NJ Inst of Technology	703	795	723	177	437	538	374	99
Total, 1st 90 institutions	242,704	232,514	235,183	225,249	177,541	175,178	175,705	172,581
91 University of Oklahoma	693	716	754	889	210	289	217	246
92 Kansas State University	692	724	711	770	178	176	223	176
93 U CA Santa Cruz	689	593	534	482	416	293	242	300
94 U CA Riverside	674	832	970	1,017	371	504	561	568
95 Tulane University	661	579	744	495	513	516	420	162
96 U of Iowa	659	789	725	797	467	607	528	641
97 University of Akron	659	579	741	674	426	386	441	446
98 University of Connecticut	653	964	1,128	1,056	467	531	541	526
99 Dartmouth College	635	601	943	1,115	599	540	699	886
100 Western Illinois U	632	584	581	349i	585	497	465	267i
Total, 1st 100 institutions	249,351	239,475	243,014	232,893	181,773	179,517	180,042	176,799
Total, all other sampled insts	32,188	33,143	32,751	39,262	21,814	21,259	20,946	26,240
Estimated total non-sampled insts	7,449	7,741	6,494	0	5,776	4,678	4,710	0

NOTE: Because of rounding, detail may not add to totals.

KEY: – = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-57. Total and federally financed R&D expenditures in the computer sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	702,189	687,199	648,076	607,679	508,661	484,776	462,942	423,319
1 Johns Hopkins Univ	78,243	74,575	81,974	72,957	77,311	74,350	81,853	72,521
2 Carnegie Mellon U	61,615	57,529	58,803	53,788	48,274	45,270	49,129	42,346
3 U of Southern California	36,158	34,490	33,362	34,948	34,729	33,052	31,550	32,275
4 Cornell University	28,418	41,487	20,077	28,331	22,774	27,005	15,983	20,887
5 Georgia Institute of Tech	26,551	24,590	20,865	20,754	13,668	12,174	10,460	11,611
6 Stanford University	21,123	15,658	11,607	10,104	18,671	14,038	10,552	9,194
7 U MD College Park	19,359	20,478	14,040	9,404	9,646	9,406	7,065	3,891
8 MA Institute of Tech	15,714	14,491	13,889	13,707	10,313	9,003	10,084	10,213
9 Ohio State University	11,068	9,594	8,466	6,789	3,009	1,810	1,686	1,172
10 U of Tennessee System	10,560	10,567	15,326	8,445	6,890	7,286	12,084	6,232
Total, 1st 10 institutions	308,809	303,459	278,409	259,227	245,285	233,394	230,446	210,342
11 Rice University	10,208	9,700	9,481	7,049	9,976	8,398	7,782	5,440
12 California Inst of Tech	10,175	4,513	5,677	6,161	9,745	4,291	5,461	5,674
13 U MA Amherst	10,105	9,307	10,564	9,984	5,716	4,664	6,246	5,645
14 Syracuse University	10,052	6,693	8,110	6,569	3,380	1,910	1,900	2,230
15 University of Michigan	9,718	15,981	16,600	19,678	3,263	11,139	13,061	12,949
16 U TX Austin	9,629	10,190	13,994	14,252	6,856	6,663	8,261	6,854
17 University of Minnesota	9,590	12,665	15,705	11,302	7,187	9,566	11,271	8,590
18 Rutgers the State U NJ	9,451	10,526	6,729	3,986	5,746	6,926	4,212	1,725
19 University of Utah	9,412	7,521	7,010	7,487	9,237	6,897	6,047	6,414
20 U TX Arlington	8,641	5,213	2,701	1,085	7,910	3,540	563	116
Total, 1st 20 institutions	405,790	395,768	374,980	346,780	314,301	297,388	295,250	265,979
21 Oregon Grad Inst Sci Tech	8,548	8,593	7,193	4,515	5,416	4,790	4,140	2,439
22 U CA Los Angeles	7,721	6,855	4,639	3,755	6,561	6,184	3,880	3,003
23 New York University	7,633	8,631	8,213	7,965	5,305	6,030	6,080	7,566
24 U of NC Chapel Hill	7,613	7,669	7,969	7,658	5,371	5,306	5,496	4,759
25 University of Colorado	6,837	6,945	9,677	4,722	5,047	4,776	5,474	2,378
26 U of Pennsylvania	6,791	6,612	6,871	6,883	6,155	5,551	5,282	5,351
27 U WI Madison	6,679	6,263	6,633	5,171	5,599	5,021	5,233	3,883
28 Washington University	6,313	6,617	5,053	4,437	5,117	5,167	3,774	3,491
29 SUNY Buffalo	6,031	7,623	7,050	7,099	5,076	5,057	4,512	5,840
30 U of Illinois Urbana	5,944	8,671	12,030	17,192	3,838	5,253	4,896	8,770
Total, 1st 30 institutions	475,900	470,247	450,308	416,177	367,786	350,523	344,017	313,459
31 Howard University	5,914	2,859	172	804	5,531	2,428	167	788
32 Texas A&M University	5,808	5,202	4,111	3,496	1,730	1,322	941	1,233
33 U of Washington	5,714	5,249	3,875	3,596	4,769	4,444	3,563	3,443
34 Michigan State University	5,460	4,424	2,529	2,138	1,157	820	1,289	1,351
35 Pennsylvania State U	5,127	5,243	1,248	1,689	3,810	4,234	616	899
36 U CA Santa Barbara	5,067	4,740	4,544	4,122	4,046	3,661	3,404	3,157
37 Purdue University	4,781	4,492	3,365	2,706	3,186	3,082	2,200	1,838
38 Columbia University	4,722	4,277	3,923	3,188	3,927	3,756	3,263	2,402
39 Iowa State University	4,598	4,745	4,362	5,217	230	156	174	411
40 University of Arizona	4,509	4,590	4,460	3,993	3,629	3,623	3,096	2,422
Total, 1st 40 institutions	527,600	516,068	482,897	447,126	399,801	378,049	362,730	331,403
41 Brown University	4,496	3,490	3,805	5,050	2,930	2,311	2,637	3,477
42 West Virginia University	4,130	3,883	5,250	6,172	3,684	3,615	3,035	4,307
43 Princeton University	4,118	2,879	3,307	3,331	2,186	1,760	1,970	1,758
44 U of Alabama Huntsville	3,916	3,840	3,440	3,405	2,088	2,421	2,102	2,110
45 University of Virginia	3,846	3,506	3,536	2,936	2,779	2,917	2,983	2,141
46 University of Delaware	3,779	3,250	3,170	2,385	2,464	2,500	2,403	1,760
47 US Naval Postgrad School	3,738i	3,371	4,345	2,620	3,682i	3,347	4,345	2,595
48 Clark Atlanta University	3,525	2,213	1,088	1,017	2,119	1,616	920	868
49 Northwestern University	3,321	3,684	6,735	12,236	3,140	3,339	3,766	3,294
50 University of Florida	3,029	2,421	2,518	2,616	1,884	1,397	1,198	1,364
Total, 1st 50 institutions	565,498	548,605	520,091	488,894	426,757	403,272	388,089	355,077

See explanatory information and SOURCE at end of table.

Table B-57. Total and federally financed R&D expenditures in the computer sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 University of Oregon	3,010	3,066	1,864	879	2,460	2,727	1,436	659
52 U CA Irvine	2,979	3,160	3,863	4,032	1,742	2,374	2,998	3,194
53 Florida State University	2,939	1,129	947	397	1,986	489	333	14
54 University of Rochester	2,922	2,365	2,377	2,318	2,831	2,230	2,198	2,172
55 Indiana University	2,880	2,717	2,605	1,327	2,213	2,202	2,101	858
56 University of New Mexico	2,877	3,058	1,736	1,196	2,565	2,487	447	138
57 Polytechnic University	2,875	3,776	2,341	0i	1,400	2,336	1,224	0i
58 NJ Inst of Technology	2,853	1,947	1,551	483	1,054	465	380	151
59 New Mexico State Univ	2,716	4,054	2,719	3,120	2,341	3,355	2,036	2,287
60 U of Nevada Las Vegas	2,630i	2,600	1,521	1,914	2,095i	1,967	1,505	1,203
Total, 1st 60 institutions	594,179	576,477	541,615	504,560	447,444	423,904	402,747	365,753
61 Yale University	2,585	2,653	3,352	4,230	1,971	2,186	2,910	3,957
62 U of Southwestern LA	2,517	2,689	2,359	4,743	645	446	439	175
63 University of Georgia	2,438	2,804	4,061	4,938	426	264	916	1,370
64 SUNY Stony Brook	2,323	2,291	1,857	1,570	1,510	1,522	1,263	917
65 George Mason University	2,148	2,793	2,560	1,429	1,778	2,297	1,974	1,161
66 University of Houston	2,121	919	384	272	1,316	428	147	92
67 Duke University	1,889	1,979	1,958	2,273	1,299	1,321	1,426	1,993
68 University of Connecticut	1,888	2,018	1,817	2,089	250	423	297	292
69 VA Polytech Inst & St U	1,859	1,635	1,329	919	1,411	1,170	1,069	682
70 Illinois Inst of Tech	1,800	932	219	99	1,736	889	207	95
Total, 1st 70 institutions	615,747	597,190	561,511	527,122	459,786	434,850	413,395	376,487
71 Western Illinois U	1,790	357	378	464i	1,151	212	255	324i
72 NC State U Raleigh	1,759	1,161	1,260	1,018	884	667	729	625
73 University of Pittsburgh	1,667	1,586	1,773	1,527	1,429	1,300	1,438	1,256
74 U CA Davis	1,629	1,778	1,244	92	1,496	1,589	1,155	0
75 Arizona State University	1,614	1,236	1,205	1,062	760	559	697	557
76 University of Oklahoma	1,563	1,846	2,653	3,287	459	505	1,147	2,127
77 The University of Alabama	1,535	1,156	191	135	402	916	151	21
78 Oregon State University	1,529	894	888	873	632	510	415	373
79 Univ of Hawaii Manoa	1,485	1,539	1,032	928	1,376	1,408	893	911
80 U MD Baltimore County	1,369	598	148	177	545	327	114	40
Total, 1st 80 institutions	631,687	609,341	572,283	536,685	468,920	442,843	420,389	382,721
81 U of Missouri Kansas City	1,311	1,000	960	838	83	0	0	0
82 Rensselaer Polytech Inst	1,286	1,487	1,395	1,545	847	996	685	774
83 University of Chicago	1,280	1,169	1,209	1,463	1,202	1,073	1,113	1,335
84 Clemson University	1,268	1,652	1,731	1,422	420	573	546	422
85 Colorado State University	1,264	851	765	550	693	587	555	283
86 Old Dominion University	1,222	919	706	683	858	642	641	444
87 Louisiana St U, All Camp	1,189	853	549	567	298	267	180	138
88 Harvard University	1,178	1,833	1,751e	1,833	982	1,579	1,582	1,767
89 Texas Tech University	1,169	869	869	849	634	451	357	276
90 U of Missouri Rolla	1,093	325	411	249	83	215	320	98
Total, 1st 90 institutions	643,947	620,299	582,629	546,684	475,020	449,226	426,368	388,258
91 Drexel University	1,082	1,501	1,741	749	162	255	256	359
92 U of Nebraska Lincoln	1,081	916	947	1,053	398	759	785	380
93 U of Iowa	1,076	989	643	366	607	427	384	223
94 Morris Brown College	1,053	15	27	0	236	15	15	0
95 U CA Santa Cruz	1,018	781	839	1,154	953	735	801	1,111
96 Northeastern University	973	904	1,094	1,590	925	891	1,076	1,543
97 CA St U Chico	969	1,522	657	657	0	25	26	26
98 Florida A&M University	968	430	117	91i	968	422	117	75i
99 Brandeis University	943	1,470	685	471	751	1,232	387	155
100 SUNY Binghamton	924	1,488	1,144	643	280	305	197	175
Total, 1st 100 institutions	654,034	630,315	590,523	553,458	480,300	454,292	430,412	392,305
Total, all other sampled insts	35,181	46,019	49,949	54,221	20,500	25,316	27,674	31,014
Estimated total non-sampled insts	12,974	10,865	7,604	0	7,861	5,168	4,856	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-58. R&D expenditures in the life sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Agricultural sciences	Biological sciences	Medical sciences	Other
Total, all institutions	12,696,650	12,226,760	11,497,259	10,851,066	1,890,195	3,970,981	6,354,922	480,552
1 U CA San Francisco	320,757	329,742	312,393	314,599	0	0	320,757	0
2 Johns Hopkins Univ	290,860	283,666	270,314	249,430	0	69,186	203,375	18,299
3 U of Washington	266,595	257,289	226,033	216,655	18,763	80,653	163,576	3,603
4 University of Minnesota	244,893	239,292	219,241	236,421	52,015	44,279	141,957	6,642
5 U WI Madison	241,824	233,792	222,482	212,123	26,935	71,681	139,136	4,072
6 U CA Los Angeles	241,194	189,275	178,014	178,798	0	16,444	219,548	5,202
7 University of Michigan	230,469	230,231	212,198	203,823	0	68,429	141,748	20,292
8 U of Pennsylvania	216,836	201,472	183,502	171,715	1,097	74,468	135,127	6,144
9 U CA Davis	214,906	210,514	199,638	193,843	141,827	8,272	64,807	0
10 Yale University	199,028	190,699	182,368	180,991	1,610	71,417	126,001	0
Total, 1st 10 institutions	2,467,362	2,365,972	2,206,183	2,158,398	242,247	504,829	1,656,032	64,254
11 Duke University	197,213	176,749	174,326	158,918	3,051	35,819	158,088	255
12 Cornell University	193,361	191,748	184,425	171,569	41,747	47,432	104,182	0
13 Washington University	192,578	182,188	168,452	157,620	0	81,179	107,633	3,766
14 Baylor Col of Medicine	184,613	190,375	186,865	172,252	0	85,229	99,384	0
15 U CA San Diego	179,999	165,045	156,724	153,495	0	20,249	159,294	456
16 Harvard University	178,308	174,093	168,143e	159,744	30	85,984	92,294	0
17 U of Alabama Birmingham	159,287	147,212	133,287	125,857	0	45,692	111,179	2,416
18 University of Pittsburgh	157,903	151,868	153,389	145,177	0	5,830	148,581	3,492
19 University of Florida	152,647	144,751	92,646	85,540	73,230	33,571	43,205	2,641
20 Columbia University	151,274	153,782	148,100	132,312	0	58,347	92,565	362
Total, 1st 20 institutions	4,214,545	4,043,783	3,772,540	3,620,882	360,305	1,004,161	2,772,437	77,642
21 U of NC Chapel Hill	146,892	151,278	150,449	133,978	0	67,728	67,640	11,524
22 University of Georgia	146,618	142,910	130,849	120,779	72,109	57,002	16,998	509
23 Texas A&M University	143,595	141,228	141,130	129,639	58,429	73,982	11,180	4
24 University of Arizona	142,920	136,777	116,202	110,620	41,710	46,851	51,353	3,006
25 Stanford University	142,816	147,121	152,104	142,057	0	10,669	131,024	1,123
26 Emory University	136,343	134,022	121,426	106,481	0	29,654	83,002	23,687
27 U of Southern California	135,848	121,157	117,145	103,156	0	6,050	121,104	8,694
28 Ohio State University	133,876	124,664	117,294	114,193	40,420	36,717	49,981	6,758
29 U of Iowa	131,084	120,115	114,664	107,808	0	27,391	101,434	2,259
30 U TX SW Med Ctr Dallas	130,162	125,301	118,398	114,258	0	57,223	72,753	186
Total, 1st 30 institutions	5,604,699	5,388,356	5,052,201	4,803,851	572,973	1,417,428	3,478,906	135,392
31 U CA Berkeley	125,648	113,300	122,182	114,359	48,670	46,823	29,585	570
32 U of MD Baltimore	122,207	107,874	110,866	111,772	0	18,331	97,766	6,110
33 University of Colorado	116,864	110,510	107,413	91,032	1	36,427	75,876	4,560
34 New York University	116,437	119,884	110,518	99,503	0	38,676	49,825	27,936
35 Michigan State University	116,166	119,040	101,327	84,705	62,953	39,366	11,638	2,209
36 U TX MD Anderson Cncr	115,867	116,723	117,149	121,998	0	52,929	62,938	0
37 Louisiana St U, All Camp	115,734	112,925	102,957	95,758	48,396	41,588	17,691	8,059
38 Case Western Reserve U	106,472	104,951	98,002	89,427	0	65,334	40,998	140
39 Northwestern University	103,209	93,028	87,992	75,472	0	40,760	60,163	2,286
40 Georgetown University	103,154	92,835	72,439	63,357	0	11,282	89,366	2,506
Total, 1st 40 institutions	6,746,457	6,479,426	6,083,046	5,751,234	732,993	1,808,944	4,014,752	189,768
41 The Rockefeller Univ	98,630	89,806	67,139	67,277	0	95,757	2,873e	0
42 U Med & Dent NJ	98,535	96,365	86,866	76,410	0	41,253	57,282	0
43 University of Chicago	98,226	84,545	79,961	73,213	116	33,029	61,360	3,721
44 Indiana University	94,500	87,901	81,488	75,107	0	31,579	59,155	3,766
45 Pennsylvania State U	94,400	93,751	96,520	92,148	27,342	40,491	21,902	4,665
46 Vanderbilt University	93,514	86,779	83,959	74,218	0	50,517	34,104	8,893
47 CUNY Mt Sinai Sch Med	92,405	92,008	86,179	75,337	0	23,239	69,166	0
48 Purdue University	91,770	94,927	84,027	74,151	33,401	43,824	10,883	3,662
49 Yeshiva University	91,430	94,739	92,881	89,636	0	23,772	47,543	20,115
50 University of Rochester	90,143	95,158	88,367	89,730	0	31,883	55,063	3,197
Total, 1st 50 institutions	7,690,010	7,395,405	6,930,433	6,538,461	793,852	2,224,288	4,434,083	237,787

See explanatory information and SOURCE at end of table.

Table B-58. R&D expenditures in the life sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Agricultural sciences	Biological sciences	Medical sciences	Other
51 University of Miami	89,080	87,002	84,018	83,633	0	14,833	74,202	45
52 University of IL Chicago	88,861	90,842	83,844	79,538	0	23,469	58,920	6,472
53 NC State U Raleigh	88,772	88,254	86,319	81,135	45,573	37,116	4,768	1,315
54 U of Missouri Columbia	88,140	88,685	86,852	74,708	40,803	26,612	20,083	642
55 SUNY Buffalo	87,207	90,738	91,711	80,868	0	36,007	44,628	6,572
56 University of Kentucky	85,515	81,524	78,171	72,789	35,651	775	46,568	2,521
57 Wayne State University	84,603	78,850	69,159	62,874	0	1,389	81,331	1,883
58 University of Virginia	84,561	84,936	76,442	66,704	0	25,733	56,033	2,795
59 Rutgers the State U NJ	84,431	86,367	78,384	73,650	28,536	34,800	16,311	4,784
60 U TX Hlth Sci Ctr San Ant	83,028	87,336	83,535	75,239	0	28,612	54,416	0
Total, 1st 60 institutions	8,554,208	8,259,939	7,748,868	7,289,599	944,415	2,453,634	4,891,343	264,816
61 UT Houston Hlth Sci Ctr	82,800	74,608	65,238	58,178	0	16,964	63,931	1,905
62 U of Tennessee System	79,094	79,644	73,866	71,803	27,670	22,344	26,544	2,536
63 University of Connecticut	78,643	72,655	75,294	76,948	6,523	30,027	41,544	549
64 Oregon State University	76,770	75,010	72,240	68,080	56,312	17,982	2,061	415
65 Oregon Health Sciences U	76,710i	71,282i	60,871	54,978i	0i	18,534i	52,123i	6,053
66 Boston University	75,059	73,222	64,285	63,741	0	5,079	68,016	1,964
67 U CA Irvine	73,801	71,498	70,102	66,886	0	41,790	32,011	0
68 U Tx Med Br Galveston	73,759	72,569	72,773	67,998	0	0	73,707	52
69 Wake Forest University	73,003	66,819	51,090	56,478	0	683	72,320	0
70 Virginia Commonwealth U	72,016	69,984	70,569	71,270	0	24,509	44,793	2,714
Total, 1st 70 institutions	9,315,863	8,987,230	8,425,196	7,945,959	1,034,920	2,631,546	5,368,393	281,004
71 Iowa State University	71,154	72,196	79,520	79,053	36,758	27,422	3,487	3,487
72 University of Utah	70,658	66,166	63,996	65,207	0	26,829	39,448	4,381
73 Thomas Jefferson U	69,154	65,705	56,932	51,106	0	37,474	31,460	220
74 Tulane University	68,169	83,432	61,322	57,770	0	8,998	23,849	35,322
75 Colorado State University	66,166	67,864	62,196	57,825	36,459	23,366	5,989	352
76 SUNY Stony Brook	66,034	60,793	56,949	56,711	0	35,557	29,217	1,260
77 U of Nebraska Lincoln	65,873	69,409	71,200	67,964	47,038	12,226	5,988	621
78 University of Cincinnati	64,766	65,129	65,469	64,906	0	33,198	31,568	0
79 U of Illinois Urbana	63,634	56,814	55,913	54,529	35,510	25,003	3,121	0
80 U MA Worcester	63,341	62,441	61,790	60,602	0	18,338	25,196	19,807
Total, 1st 80 institutions	9,984,812	9,657,179	9,060,483	8,561,632	1,190,685	2,879,957	5,567,716	346,454
81 Tufts University	62,376	64,053	61,668	55,545e	0	53,902	6,836	1,638
82 University of Kansas	60,097	58,665	57,486	49,786	0	36,775	13,735	9,587
83 Washington State U	59,458	55,616	56,571	58,054	24,096	29,619	3,458	2,285
84 U of South Florida	56,446	54,247	56,049	50,539	0	1,336	54,903	207
85 Med U of South Carolina	54,426	57,495	46,249	42,543	0	11,803	30,745	11,878
86 Mississippi State U	53,126	39,717	41,822	40,198	45,191	4,087	3,848	0
87 U CA Riverside	52,873	51,495	48,368	49,153	46,622	4,020	2,231	0
88 VA Polytech Inst & St U	52,424	53,441	51,945	51,095	43,785	6,205	2,239	195
89 Allegheny U of Hlth Sci	48,790	41,237	45,218	42,752	0	18,893	23,225	6,672
90 Kansas State University	48,419	47,597	46,060	44,871	33,971	14,030	418	0
Total, 1st 90 institutions	10,533,247	10,180,742	9,571,919	9,046,168	1,384,350	3,060,627	5,709,354	378,916
91 University of Oklahoma	47,858	45,927	43,580	40,577	0	22,121	23,168	2,569
92 Medical Col of Wisconsin	47,365	44,169	49,604	48,689	0	7,578	39,787	0
93 Oklahoma State University	47,049	44,071	35,751	38,176	24,206	11,915	4,566	6,362
94 University of Vermont	46,766	47,065	46,542	45,726	6,182	17,820	21,041	1,723
95 Auburn University	46,720	49,167	48,307	40,054	33,640	9,310	2,981	789
96 Rush University	45,056	39,052	36,304	29,897	0	8,130	30,684	6,242
97 SUNY Albany	44,725	19,432	22,227	19,869	0	44,725	0	0
98 U of NE Med Ctr Omaha	42,612	38,287	33,997	31,669	0	25,774	16,838	0
99 University of Idaho	41,210	38,934	34,860	32,440	33,384	7,368	458	0
100 Dartmouth College	40,927	39,852	43,869	47,169	0	1,893	39,034	0
Total, 1st 100 institutions	10,983,535	10,586,698	9,966,960	9,420,434	1,481,762	3,217,261	5,887,911	396,601

See explanatory information and SOURCE at end of table.

Table B-58. R&D expenditures in the life sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Agricultural sciences	Biological sciences	Medical sciences	Other
101 Clemson University	40,820	38,963	35,024	37,009	25,649	11,093	2,824	1,254
102 Temple University	40,334	38,701	39,870	36,321	0	20,449	19,807	78
103 U Arkansas Main	38,720	37,148	36,942	37,500	37,056	1,664	0	0
104 Loyola U of Chicago	37,637	34,877i	32,109	25,291	0	18,501	16,407	2,729
105 Unif Svcs U of Hlth Sci	36,851	39,612	27,334	30,846	0	12,999	23,852	0
106 MA Institute of Tech	36,104	35,398	37,690	35,792	0	36,104	0	0
107 Medical Col of Georgia	35,971	31,369	28,020	24,935	0	12,668	22,962	341
108 U PR Mayaguez	33,724	33,125	14,908	13,835	33,307	417	0	0
109 U Arkansas Medical Sci	33,354	28,389	22,762	15,686	0	8,995	24,359	0
110 University of New Mexico	33,096	34,741	30,464	27,838	0	15,644	9,904	7,548
Total, 1st 110 institutions	11,350,146	10,939,021	10,272,083	9,705,487	1,577,774	3,355,795	6,008,026	408,551
111 Univ of Hawaii Manoa	32,113	31,853	29,589	29,276	9,936	10,754	1,750	9,673
112 SUNY Hlth Sci Ctr Brklyn	31,920i	30,781	27,773	27,645	0i	8,168i	23,606i	146
113 U MD College Park	31,285	37,515	30,341	63,254	21,707	9,115	0	463
114 Montana St U Bozeman	30,569	32,522	24,839	22,132	23,523	6,657	0	389
115 North Dakota State U	30,408	27,154	25,000	24,543	21,765	8,040	603	0
116 Utah State University	26,561	26,851	26,319	23,112	17,542	5,714	3,305	0
117 Brown University	26,204	21,898	21,537	20,632	0	4,453	19,402	2,349
118 West Virginia University	25,308	24,902	27,054	24,915	12,519	2,952	9,327	510
119 George Washington U	24,344	18,706	15,269	15,828	0	136	24,208	0
120 California Inst of Tech	24,137	27,462	25,670	21,982	0	24,137	0	0
Total, 1st 120 institutions	11,632,995	11,218,665	10,525,474	9,978,806	1,684,766	3,435,921	6,090,227	422,081
121 Saint Louis University	23,950	21,485	19,937	19,886	0	9,467	12,273	2,210
122 University of Louisville	23,571	17,209	14,815	14,320	0	6,913	13,495	3,163
123 San Diego St University	22,479	19,997	15,421	15,836	1,718	8,464	11,441	856
124 Texas Tech University	22,260	22,088	20,018	18,227	9,101	6,971	6,033	155
125 U Tx Austin	22,176	20,903	23,584	20,830	0	15,040	4,971	2,165
126 U of Maine	21,837	17,029	15,864	14,214	10,010	11,818	5	4
127 U MA Amherst	20,387	18,640	17,229	17,123	12,667	5,493	0	2,227
128 New Mexico State Univ	20,257	19,956	19,327	20,763	17,345	2,739	173	0
129 U of South Carolina	19,819	16,706	18,901	16,307	0	5,147	13,887	785
130 Princeton University	18,840	17,175	16,239	15,481	0	18,840	0	0
Total, 1st 130 institutions	11,848,571	11,409,853	10,706,809	10,151,793	1,735,607	3,526,813	6,152,505	433,646
131 U of Alaska Fairbanks	18,357i	17,387i	18,053i	14,797i	8,553i	9,804i	0i	0
132 U of Nevada Reno	18,264	19,687	17,248	15,775	5,820	9,110	2,410	924
133 Eastern VA Med School	17,730	17,823	17,873	15,818	0	5,623	12,047	60
134 University of Wyoming	17,625	18,049	18,528	16,679	10,847	5,377	1,401	0
135 Brandeis University	17,513	17,360	15,807	16,766	0	17,513	0	0
136 U Mississippi, All Camp	17,174	17,619	16,330	15,000	0	5,881	11,194	99
137 U MD Biotechnology Inst	16,776	12,781	10,484	--	4,958	11,578	0	240
138 C R Drew U of Med & Sci	16,386	12,500	9,347	6,852	0i	0i	16,386i	0
139 New York Medical College	16,372	18,424	18,725	18,491i	0	9,081	7,291	0
140 Sthrn IL U Carbondale	15,455	14,974	14,572	12,598	4,772	3,655	6,733	295
Total, 1st 140 institutions	12,020,223	11,576,457	10,863,776	10,284,569	1,770,557	3,604,435	6,209,967	435,264
141 University of Oregon	15,249	13,568	9,214	9,865	0	9,942	5,307	0
142 U PR Med Sci Campus	15,005	17,354	17,765	14,622	0	0	15,005	0
143 SUNY Hlth Sci Ctr Syrcse	14,093i	13,177	11,751	12,453	0i	6,868i	7,225i	0
144 Carnegie Mellon U	13,949	12,966	11,597	13,916	0	4,735	0	9,214
145 The University of Montana	13,891	12,542	10,687	9,842	5,457	7,770	476	188
146 Med Col of Ohio Toledo	13,367	12,996	12,299	11,881	0	9,499	3,831	37
147 Morehouse School of Med	12,455	7,447	7,094	7,024	0	12,007	448	0
148 U of South Alabama	12,028	11,516	11,629	10,848	0	8,824	2,777	427
149 South Dakota State U	12,009	10,881	11,344	11,113	9,406	1,422	87	1,094
150 University of Delaware	11,544	11,920	12,061	11,402	10,910	380	0	254
Total, 1st 150 institutions	12,153,813	11,700,824	10,979,217	10,397,535	1,796,330	3,665,882	6,245,123	446,478
Total, all other sampled insts	451,605	444,199	443,938	453,531	74,643	239,609	104,473	32,880
Estimated total non-sampled insts	91,232	81,737	74,104	0	19,222	65,490	5,326	1,194

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

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SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Agricultural sciences	Biological sciences	Medical sciences	Other
Total, all institutions	7,388,936	7,133,767	6,753,210	6,386,297	558,494	2,565,775	3,996,029	268,637
1 Johns Hopkins Univ	228,357	228,115	223,732	204,479	0	54,846	158,357	15,154
2 U CA San Francisco	221,864	224,271	213,252	210,148	0	0	221,864	0
3 U of Washington	202,810	190,274	177,093	173,393	11,319	68,981	119,752	2,758
4 U of Pennsylvania	164,593	152,982	140,891	130,233	325	59,160	100,931	4,177
5 U CA Los Angeles	161,934	124,560	120,497	121,961	0	13,771	143,838	4,325
6 Yale University	149,625	144,180	139,449	136,069	711	56,911	92,003	0
7 University of Michigan	144,865	149,975	137,988	126,885	0	46,486	86,399	11,980
8 U CA San Diego	143,141	136,237	130,681	126,016	0	16,849	126,292	0
9 University of Minnesota	139,154	133,872	118,286	118,145	10,589	28,772	95,649	4,144
10 Washington University	135,203	126,443	120,518	113,093	0	61,519	71,038	2,646
Total, 1st 10 institutions	1,691,546	1,610,909	1,522,387	1,460,422	22,944	407,295	1,216,123	45,184
11 Harvard University	129,710	130,755	122,176	123,020	0	71,178	58,532	0
12 University of Pittsburgh	125,971	121,344	126,263	117,065	0	4,218	119,929	1,824
13 Columbia University	124,483	126,387	123,331	116,106	0	48,345	76,048	90
14 U WI Madison	120,169	116,829	113,254	108,025	7,879	39,104	70,926	2,260
15 U of Alabama Birmingham	119,858	102,801	95,778	92,246	0	35,906	82,208	1,744
16 Stanford University	119,501	121,744	124,208	113,245	0	8,914	109,909	678
17 Duke University	115,906	115,887	110,864	101,794	914	28,942	85,907	143
18 U of NC Chapel Hill	108,904	113,144	112,974	99,994	0	51,406	52,578	4,920
19 U CA Davis	105,275	101,090	93,866	86,415	59,858	3,757	41,660	0
20 Cornell University	99,877	104,721	101,392	94,826	11,305	27,213	61,359	0
Total, 1st 20 institutions	2,861,200	2,765,611	2,646,493	2,513,158	102,900	726,278	1,975,179	56,843
21 Baylor Col of Medicine	92,294	94,197	92,404	87,623	0	56,642	35,652	0
22 University of Colorado	89,607	86,245	79,343	69,804	1	28,302	59,285	2,019
23 U of Southern California	88,447	79,478	74,810	70,287	0	4,970	76,323	7,154
24 Emory University	88,425	85,354	81,787	73,674	0	24,593	47,361	16,471
25 Case Western Reserve U	86,625	84,456	75,771	69,872	0	53,592	32,919	114
26 U of Iowa	81,645	78,156	74,873	70,492	0	18,067	62,411	1,167
27 U TX SW Med Ctr Dallas	81,468	78,892	71,468	67,943	0	38,544	42,781	143
28 University of Chicago	80,687	70,261	66,948	62,058	0	28,469	51,379	839
29 Vanderbilt University	77,157	72,703	71,988	66,346	0	42,082	27,280	7,795
30 Georgetown University	75,805	67,868	47,943	41,131	0	9,188	64,997	1,620
Total, 1st 30 institutions	3,703,360	3,563,221	3,383,828	3,192,388	102,901	1,030,727	2,475,567	94,165
31 Yeshiva University	73,396	72,132	70,718	71,771	0	20,551	38,166	14,679
32 New York University	72,872	74,400	70,854	72,187	0	29,443	29,632	13,797
33 University of Arizona	72,090	69,268	59,396	57,305	11,736	25,248	32,658	2,448
34 U CA Berkeley	67,682	60,146	57,209	53,477	16,215	37,843	13,082	542
35 University of Rochester	65,869	71,027	65,537	68,701	0	26,461	37,575	1,833
36 U of MD Baltimore	65,211	59,596	59,727	53,556	0	9,782	52,168	3,261
37 Ohio State University	61,724	63,737	58,037	57,418	6,496	23,204	28,564	3,460
38 University of Miami	61,623	60,391	58,336	58,196	0	12,848	48,739	36
39 CUNY Mt Sinai Sch Med	61,599	58,991	55,188	49,800	0	16,350	45,249	0
40 UT-Houston Hlth Sci Ctr	61,456	54,762	45,962	38,137	0	12,633	48,368	455
Total, 1st 40 institutions	4,366,882	4,207,671	3,984,792	3,772,936	137,348	1,245,090	2,849,768	134,676
41 Boston University	59,631	57,944	51,295	50,624	0	3,902	54,743	986
42 University of Utah	57,785	52,474	50,386	52,749	0	22,654	32,528	2,603
43 Northwestern University	56,999	49,751	46,146	41,409	0	26,349	29,944	706
44 Indiana University	56,549	51,443	50,302	46,584	0	20,661	33,469	2,419
45 Wake Forest University	54,124	49,656	35,720	41,163	0	673	53,451	0
46 University of Florida	52,724	51,560	51,781	45,607	11,461	17,350	22,762	1,151
47 SUNY Buffalo	52,205	52,396	62,175	59,368	0	25,605	21,398	5,202
48 Thomas Jefferson U	51,475	49,335	43,215	38,293	0	31,257	20,009	209
49 U TX Hlth Sci Ctr San Ant	51,203	54,433	51,671	48,467	0	20,748	30,455	0
50 Pennsylvania State U	48,236	45,625	45,118	45,410	6,537	25,677	13,189	2,833
Total, 1st 50 institutions	4,907,813	4,722,288	4,472,601	4,242,610	155,346	1,439,966	3,161,716	150,785

See explanatory information and SOURCE at end of table.

Table B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Agricultural sciences	Biological sciences	Medical sciences	Other
51 Oregon Health Sciences U	48,222i	46,428i	40,980	37,362i	0i	13,750i	29,183i	5,289
52 University of Virginia	47,783	50,900	47,377	41,659	0	20,679	25,012	2,092
53 U Med & Dent NJ	47,505	45,734	40,687	35,524	0	19,702	27,803	0
54 Michigan State University	43,889	46,185	42,179	39,470	13,555	22,840	5,928	1,566
55 Tufts University	43,697	43,599	43,115	38,439	0	38,386	4,275	1,036
56 University of Georgia	43,627	44,933	43,577	41,856	13,435	27,379	2,452	361
57 Virginia Commonwealth U	42,904	43,879	45,295	46,036	0	17,357	24,642	905
58 University of IL Chicago	42,757	44,425	43,159	38,859	0	13,986	26,762	2,009
59 U CA Irvine	42,129	41,187	42,142	40,665	0	30,306	11,823	0
60 SUNY Stony Brook	41,015	39,107	37,088	35,952	0	23,086	17,751	178
Total, 1st 60 institutions	5,351,341	5,168,665	4,898,200	4,638,432	182,336	1,667,437	3,337,347	164,221
61 U TX MD Anderson Cncr	40,709	42,205	39,572	38,065	0	20,211	20,498	0
62 Med U of South Carolina	40,637	36,417	28,507	21,471	0	9,106	20,381	11,150
63 U MA Worcester	40,198	36,970	34,923	33,820	0	15,461	23,130	1,607
64 Tulane University	40,152	50,900	30,968	29,267	0	6,442	9,649	24,061
65 Texas A&M University	40,087	33,297	33,685	31,418	17,681	14,897	7,509	0
66 Oregon State University	39,057	33,922	32,480	30,390	28,888	9,511	404	254
67 Colorado State University	39,003	41,567	35,455	39,663	20,507	14,559	3,937	0
68 University of Cincinnati	38,541	39,430	39,706	40,519	0	21,652	16,889	0
69 U TX Med Br Galveston	38,323	33,204	32,775	30,555	0	0	38,323	0
70 Wayne State University	37,545	37,521	35,208	32,745	0	794	35,670	1,081
Total, 1st 70 institutions	5,745,593	5,554,098	5,241,479	4,966,345	249,412	1,780,070	3,513,737	202,374
71 SUNY Albany	37,400	14,323	13,299	15,717	0	37,400	0	0
72 U of Tennessee System	36,635	36,852	35,803	33,375	5,556	15,821	13,758	1,500
73 University of Kentucky	36,567	36,255	36,168	30,362	7,782	695	27,624	466
74 University of Connecticut	35,719	33,300	33,986	36,023	1,112	16,464	17,938	205
75 Louisiana St U, All Camp	35,603	36,180	32,301	30,824	2,017	22,993	8,429	2,164
76 Medical Col of Wisconsin	34,527	31,098	31,459	31,261	0	5,524	29,003	0
77 The Rockefeller Univ	33,735	35,366	35,994	33,148	0	30,962	2,773e	0
78 Purdue University	33,653	36,250	33,903	27,707	7,239	20,026	4,398	1,990
79 Dartmouth College	30,703	31,146	31,791	35,063	0	1,718	28,985	0
80 MA Institute of Tech	29,882	31,514	32,121	31,601	0	29,882	0	0
Total, 1st 80 institutions	6,090,017	5,876,382	5,558,304	5,271,426	273,118	1,961,555	3,646,645	208,699
81 U of Illinois Urbana	29,516	28,006	27,281	26,217	10,586	17,576	1,354	0
82 Allegheny U of Hlth Sci	27,723	23,905	26,324	26,664	0	14,796	10,583	2,344
83 University of Vermont	27,716	29,253	30,901	29,456	2,593	12,913	11,901	309
84 NC State U Raleigh	26,979	27,515	27,879	27,175	11,176	13,358	1,735	710
85 Loyola U of Chicago	25,510	23,243i	20,975	15,948	0	10,526	12,615	2,369
86 University of Kansas	25,069	25,043	25,134	23,096	0	16,246	4,653	4,170
87 Univ Svcs U of Hlth Sci	24,621	25,858	18,124	22,319	0	8,685	15,936	0
88 Washington State U	23,722	22,329	21,896	23,635	7,653	13,997	519	1,553
89 U of Missouri Columbia	23,546	23,328	22,627	21,850	8,616	10,530	4,171	229
90 Rutgers the State U NJ	22,617	24,819	23,741	21,031	5,506	10,122	6,987	2
Total, 1st 90 institutions	6,347,036	6,129,681	5,803,186	5,508,817	319,248	2,090,304	3,717,099	220,385
91 University of New Mexico	22,345	21,569	18,573	16,902	0	11,125	7,043	4,177
92 Rush University	21,876	16,981	13,410	11,203	0	5,477	12,429	3,970
93 University of Oklahoma	20,909	16,442	15,142	13,604	0	11,156	9,650	103
94 Saint Louis University	20,380	18,267	17,316	17,644	0	8,708	9,462	2,210
95 California Inst of Tech	20,351	21,635	20,863	18,782	0	20,351	0	0
96 Iowa State University	20,134	23,625	24,726	23,387	11,254	8,020	163	697
97 Temple University	19,628	19,231	18,588	17,099	0	10,869	8,701	58
98 SUNY Hlth Sci Ctr Brklyn	19,072i	18,374	16,695	17,916	0i	5,293i	13,756i	23
99 VA Polytech Inst & St U	17,614	15,452	14,008	13,466	14,851	2,092	594	77
100 U CA Riverside	16,940	16,377	13,859	12,498	13,153	2,015	1,772	0
Total, 1st 100 institutions	6,546,285	6,317,634	5,976,366	5,671,318	358,506	2,175,410	3,780,669	231,700

See explanatory information and SOURCE at end of table.

Table B-59. Federally financed R&D expenditures in the life sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Agri-cultural sciences	Bio-logical sciences	Medical sciences	Other
101 Brown University	16,920	15,276	14,561	14,225	0	2,891	12,750	1,279
102 U Arkansas Medical Sci	16,796	16,117	13,410	10,964	0	5,508	11,288	0
103 U of Nebraska Lincoln	16,583	19,283	21,103	15,156	10,957	4,212	1,105	309
104 U TX Austin	15,812	15,340	15,924	13,312	0	10,901	3,249	1,662
105 C R Drew U of Med & Sci	15,288	10,500	7,674	6,483	0i	0i	15,288i	0
106 Univ of Hawaii Manoa	15,155	14,527	13,801	12,406	2,098	6,120	1,413	5,524
107 U of NE Med Ctr Omaha	14,029	13,375	12,256	10,131	0	8,917	5,112	0
108 Mississippi State U	13,709	12,075	12,346	11,875	11,773	1,307	629	0
109 Clemson University	13,525	13,508	11,038	10,975	8,498	3,675	936	416
110 Kansas State University	13,470	13,154	12,802	12,658	6,616	6,831	23	0
Total, 1st 110 institutions	6,697,572	6,460,789	6,111,281	5,789,503	398,448	2,225,772	3,832,462	240,890
111 University of Idaho	13,249	13,881	11,942	11,678	9,884	3,161	204	0
112 U PR Mayaguez	13,081	14,093	4,584	4,819	12,785	296	0	0
113 University of Oregon	12,841	11,168	7,218	7,755	0	8,408	4,433	0
114 Brandeis University	12,497	12,538	11,385	12,203	0	12,497	0	0
115 George Washington U	12,226	11,008	9,522	10,210	0	121	12,105	0
116 U PR Med Sci Campus	12,191	12,433	11,973	9,775	0	0	12,191	0
117 Princeton University	11,985	9,363	10,058	9,083	0	11,985	0	0
118 Oklahoma State University	11,812	8,530	7,572	8,723	6,500	4,391	912	9
119 New York Medical College	11,657	13,778	14,913	13,468i	0	7,527	4,130	0
120 U of South Carolina	11,586	9,511	9,776	8,390	0	3,900	7,256	430
Total, 1st 120 institutions	6,820,697	6,577,092	6,210,224	5,885,607	427,617	2,278,058	3,873,693	241,329
121 Medical Col of Georgia	11,338	11,007	9,121	7,713	0	5,214	6,118	6
122 Morehouse School of Med	11,084	6,817	6,493	6,429	0	10,686	398	0
123 U of Nevada Reno	10,974	10,305	8,451	7,840	2,691	6,326	1,564	393
124 West Virginia University	10,856	11,284	13,928	11,877	3,995	2,176	4,249	436
125 U of South Florida	10,704	10,118	7,286	7,594	0	537	10,167	0
126 U of Maine	10,664	10,467	4,943	4,587	4,198	6,466	0	0
127 University of Louisville	10,388	6,988	6,369	6,081	0	3,382	4,939	2,067
128 Auburn University	10,334	10,063	10,708	8,123	6,685	2,333	1,105	211
129 Meharry Medical College	10,331	9,616	8,593	8,646	0	5,463	4,361	507
130 Eastern VA Med School	10,203	9,824	10,162	9,753	0	1,820	8,383	0
Total, 1st 130 institutions	6,927,573	6,673,581	6,296,278	5,964,250	445,186	2,322,461	3,914,977	244,949
131 Florida A&M University	9,673	11,057	14,160	14,084i	4,335	4,854	0	484
132 Med Col of Ohio Toledo	9,559	9,243	8,726	8,282	0	7,751	1,780	28
133 San Diego St University	9,548	9,965	6,066	9,225	1,718	5,198	2,088	544
134 Utah State University	9,548	10,974	10,999	9,233	6,004	1,957	1,587	0
135 U Mississippi, All Camp	9,402	10,271	9,444	8,116	0	4,338	4,975	89
136 Montana St U Bozeman	9,257	10,170	9,035	8,592	5,487	3,744	0	26
137 U MD College Park	8,899	9,453	9,435	8,551	3,865	4,923	0	111
138 U Arkansas Main	8,369	9,234	8,606	8,898	7,832	537	0	0
139 U of South Alabama	8,225	8,160	7,804	7,436	0	5,877	2,348	0
140 The University of Montana	8,044	7,288	5,456	4,682	2,659	4,983	293	109
Total, 1st 140 institutions	7,018,097	6,769,396	6,386,009	6,051,349	477,086	2,366,623	3,928,048	246,340
141 U MA Amherst	7,890	6,399	6,655	7,152	3,367	3,535	0	988
142 Howard University	7,762	7,438	7,419	8,039	0	2,972	4,790	0
143 New Mexico State Univ	7,455	7,036	7,971	9,716	5,494	1,940	21	0
144 University of Wyoming	7,071	7,506	8,428	8,243	4,340	2,500	231	0
145 U CA Santa Cruz	6,786	4,469	4,438	3,745	58	6,728	0	0
146 SUNY Hlth Sci Ctr Syrcse	6,764i	6,854	6,555	7,238	0i	4,948i	1,816i	0
147 Tuskegee University	6,752	5,862	5,328	4,087	3,551	1,200	2,001	0
148 Albany Medical College	6,691	8,686	8,344	8,564	0	3,748	2,943	0
149 Clark Atlanta University	6,628	2,717	4,331	4,125	0	3,812	2,571	245
150 Carnegie Mellon U	6,613	6,793	6,089	6,514	0	3,271	0	3,342
Total, 1st 150 institutions	7,088,509	6,833,156	6,451,567	6,118,772	493,896	2,401,277	3,942,421	250,915
Total, all other sampled insts	262,782	262,996	264,828	267,525	58,387	136,434	51,106	16,855
Estimated total non-sampled insts	37,645	37,615	36,815	0	6,211	28,064	2,502	867

NOTE: Because of rounding, detail may not add to totals.

KEY: .. = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-60. Total and federally financed R&D expenditures in the agricultural sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	1,890,195	1,818,420	1,665,803	1,558,791	558,494	536,475	498,211	449,963
1 U CA Davis	141,827	105,918	99,518	99,428	59,858	38,326	34,822	29,917
2 University of Florida	73,230	74,177	24,992	20,807	11,461	11,370	11,276	9,616
3 University of Georgia	72,109	67,925	63,668	57,269	13,435	14,472	12,746	11,251
4 Michigan State University	62,953	64,495	53,965	33,694	13,555	15,329	15,872	15,701
5 Texas A&M University	58,429	54,433	55,362	49,598	17,681	10,738	10,955	10,349
6 Oregon State University	56,312	54,318	51,087	35,740	28,888	24,814	22,637	13,098
7 University of Minnesota	52,015	52,066	55,887	59,265	10,589	11,728	11,663	10,745
8 U CA Berkeley	48,670	48,674	47,208	47,751	16,215	15,542	14,715	15,421
9 Louisiana St U. All Camp	48,396	47,595	45,077	40,713	2,017	1,799	1,399	1,044
10 U of Nebraska Lincoln	47,038	51,301	54,435	51,431	10,957	14,215	16,959	11,300
Total, 1st 10 institutions	660,979	620,902	551,199	495,696	184,656	158,333	153,044	128,442
11 U CA Riverside	46,622	45,529	42,625	43,090	13,153	13,204	11,023	10,174
12 NC State U Raleigh	45,573	45,423	45,258	42,047	11,176	11,904	12,641	12,213
13 Mississippi State U	45,191	36,532	37,695	36,674	11,773	10,877	10,939	10,662
14 VA Polytech Inst & St U	43,785	43,837	41,310	38,493	14,851	12,306	10,073	9,057
15 Cornell University	41,747	43,615	43,310	39,002	11,305	12,756	12,640	11,462
16 University of Arizona	41,710	38,884	35,755	32,499	11,736	10,984	9,872	8,487
17 U of Missouri Columbia	40,803	41,200	40,662	30,402	8,616	8,849	8,037	6,840
18 Ohio State University	40,420	25,169	26,588	28,036	6,496	7,825	6,289	7,380
19 U Arkansas Main	37,056	35,243	35,176	35,160	7,832	8,559	8,202	8,102
20 Iowa State University	36,758	33,610	32,919	33,996	11,254	12,303	10,219	8,541
Total, 1st 20 institutions	1,080,644	1,009,944	932,497	855,095	292,848	267,900	252,979	221,360
21 Colorado State University	36,459	34,092	30,027	26,801	20,507	18,763	15,569	17,776
22 University of Kentucky	35,651	33,774	32,473	33,959	7,782	7,993	8,345	7,650
23 U of Illinois Urbana	35,510	31,693	30,418	30,586	10,586	10,215	10,011	9,962
24 Kansas State University	33,971	34,236	33,059	33,209	6,616	7,172	7,124	7,514
25 Auburn University	33,640	36,186	34,859	27,648	6,685	6,725	7,705	5,537
26 Purdue University	33,401	35,875	30,552	24,519	7,239	8,848	8,713	4,351
27 University of Idaho	33,384	32,562	29,700	29,578	9,884	11,054	9,713	11,169
28 U PR Mayaguez	33,307	32,417	14,231	13,449	12,785	13,735	4,328	4,508
29 Rutgers the State U NJ	28,536	27,678	22,443	22,446	5,506	5,566	4,370	3,728
30 U of Tennessee System	27,670	28,043	26,373	25,290	5,556	5,761	5,755	5,370
Total, 1st 30 institutions	1,412,173	1,336,500	1,216,632	1,122,580	385,994	363,732	334,612	298,925
31 Pennsylvania State U	27,342	30,155	36,444	35,739	6,537	6,696	8,203	8,431
32 U WI Madison	26,935	26,530	25,999	27,119	7,879	8,536	7,709	9,016
33 Clemson University	25,649	24,827	23,218	23,966	8,498	8,608	7,317	7,107
34 Oklahoma State University	24,206	25,124	23,242	23,219	6,500	3,506	4,073	4,170
35 Washington State U	24,096	23,084	23,735	25,488	7,653	6,737	6,864	8,497
36 Montana St U Bozeman	23,523	25,395	18,773	16,241	5,487	5,788	5,456	5,251
37 North Dakota State U	21,765	18,649	16,549	17,433	3,763	3,919	3,821	3,738
38 U MD College Park	21,707	28,708	13,748	28,262	3,865	4,240	2,882	2,051
39 U of Washington	18,763	17,518	7,154	7,547	11,319	10,797	4,974	4,640
40 Utah State University	17,542	17,529	18,142	15,657	6,004	6,468	7,312	6,263
Total, 1st 40 institutions	1,643,701	1,574,019	1,423,636	1,343,251	453,499	429,027	393,223	358,089
41 New Mexico State Univ	17,345	17,233	15,535	13,970	5,494	5,186	5,088	4,343
42 U MA Amherst	12,667	10,276	9,190	8,857	3,367	1,970	1,954	1,959
43 West Virginia University	12,519	12,221	15,194	13,829	3,995	4,061	6,505	5,092
44 University of Delaware	10,910	11,326	11,378	10,418	1,868	1,880	2,201	1,712
45 University of Wyoming	10,847	11,968	12,050	9,961	4,340	4,570	4,838	4,205
46 U of Maine	10,010	8,831	8,185	7,643	4,198	4,087	1,619	1,471
47 Univ of Hawaii Manoa	9,936	11,097	10,122	10,464	2,098	2,161	2,184	1,638
48 South Dakota State U	9,406	8,561	8,180	8,245	3,027	3,028	2,979	2,575
49 Texas Tech University	9,101	7,677	8,041	7,913	1,876	1,672	1,660	1,248
50 U of Alaska Fairbanks	8,553i	7,888i	8,139i	6,466i	1,606i	1,974i	2,159i	2,203i
Total, 1st 50 institutions	1,754,995	1,681,097	1,529,650	1,441,017	485,368	459,616	424,410	384,535

See explanatory information and SOURCE at end of table.

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Table B-60. Total and federally financed R&D expenditures in the agricultural sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 University of Connecticut	6,523	7,213	7,648	6,980	1,112	1,197	1,179	1,106
52 University of Vermont	6,182	6,614	6,334	6,109	2,593	3,028	3,096	2,961
53 U of Nevada Reno	5,820	8,461	8,378	5,095	2,691	2,678	1,721	749
54 The University of Montana	5,457	5,401	5,463	5,533	2,659	2,558	1,793	1,965
55 Florida A&M University	5,063	5,448	8,183	8,354i	4,335	4,916	6,889	7,002i
56 U MD Biotechnology Inst	4,958	3,592	3,110	--	1,140	1,046	989	--
57 Sthrn IL U Carbondale	4,772	3,601	3,906	3,664	1,549	1,411	1,726	1,798
58 Alabama A&M University	4,188i	4,039	4,525	3,912	3,353i	3,231	3,162	2,896
59 Prairie View A&M U	3,956	3,649	3,492	2,893	3,818	3,464	3,165	2,679
60 Tuskegee University	3,935	4,233	3,809	2,098	3,551	4,233	3,794	2,077
Total, 1st 60 institutions	1,805,849	1,733,348	1,584,498	1,485,655	512,169	487,378	451,924	407,768
61 Tennessee State U	3,812	3,594	3,695	2,665	2,849	2,774	2,904	2,665
62 NC A&T State University	3,754	4,280	3,126	3,040	3,238	3,571	2,858	2,800
63 U of New Hampshire	3,469	3,281	3,499	3,356	1,055	1,048	1,223	986
64 SUNY Col Env Sci Frstry	3,277i	3,265i	3,252	3,129	400i	423i	445	394
65 Southern U A&M All Camp	3,144	2,796	1,783	2,346	2,268	2,377	1,782	1,949
66 Duke University	3,051	2,787	2,733	2,632	914	691	870	1,116
67 Northern Arizona U	2,962	3,157	3,446	783	1,391	1,311	1,151	783e
68 Lincoln University	2,712	2,509	2,787	2,647	2,428	2,309	2,576	2,415
69 Langston University	2,521	3,187	2,046	1,881	2,521	2,661	1,929	1,570
70 Alcorn State University	2,498	2,309i	2,121	1,887	2,498	2,303i	2,109	1,874
Total, 1st 70 institutions	1,837,049	1,764,513	1,612,986	1,510,021	531,731	506,846	469,771	424,320
71 Kentucky State University	2,416	2,779	2,512	2,174	2,410	2,779	2,512	2,174
72 Georgia Institute of Tech	2,249	1,523	1,249	1,509	1,158	754	626	844
73 Michigan Tech University	2,143	2,057	1,887	2,215i	1,279	1,393	1,161	1,414i
74 Virginia State University	2,124	2,124	3,187	3,750	1,589	1,589	3,747	3,710
75 U Arkansas Pine Bluff	1,987	3,620	2,195	2,089	1,638	2,649	1,509	1,397
76 Stephen F Austin St U	1,847	1,853	1,807	1,359	255	162	334	269
77 U of the Virgin Islands	1,821	1,497i	1,167	1,684	1,818	1,260i	697	1,030
78 Fort Valley State U	1,741	371i	328	124	1,741	371i	328	124
79 San Diego St University	1,718	3,025	16	3,151	1,718	3,025	0	3,143
80 Yale University	1,610	1,542	1,213	1,116	711	694	447	411
Total, 1st 80 institutions	1,856,705	1,784,904	1,629,147	1,529,192	546,048	521,522	481,132	438,836
81 U CA Santa Cruz	1,563	1,410	1,780	1,318	58	116	71	49
82 U WI Stevens Point	1,525	1,794	1,430	1,109	627	825	553	352
83 U of Rhode Island	1,492i	3,100i	4,915i	4,818i	410i	395i	374i	370i
84 Western Illinois U	1,320	1,976	1,939	2,164i	977	1,558	1,541	1,626i
85 Northeast Louisiana U	1,126	53	0	0	0	0	0	0
86 U of Pennsylvania	1,097	872	498	0	325	135	180	0
87 University of DC	892	979i	1,058e	1,007i	362	487i	611e	576i
88 U MD Eastern Shore	800	690	773	2,487	800	690	773	2,133
89 U MA Dartmouth	739	627	664	904	710	627	664	904
90 Delaware State University	581	226	2,363	0	505	190	2,062	0
Total, 1st 90 institutions	1,867,840	1,796,631	1,644,567	1,542,999	550,822	526,545	487,961	444,846
91 Arizona State University	505	387	1,183	225	268	194	85	53
92 Illinois State University	423	446	436	216	185	179	226	147
93 U of Southwestern LA	384	436	298	317	90	83	27	17
94 Portland State University	328	0	0	0	328	0	0	0
95 Louisiana Tech University	226i	218i	206i	226	219i	212i	200i	156
96 CA St U Chico	171	103	77	77	0	35	34	34
97 Texas A&M U-Commerce	165	114	81	79	75	0	0	0
98 Tennessee Tech U	133	172	146	142	0	0	0	0
99 University of Chicago	116	40	6	0	0	0	0	0
100 Sam Houston State U	101	94i	89	50	83	80i	77	43
Total, 1st 100 institutions	1,870,392	1,798,641	1,647,089	1,544,331	552,070	527,328	488,610	445,296
Total, all other sampled insts	581	2,688	3,285	14,460	213	1,292	2,015	4,667
Estimated total non-sampled insts	19,222	17,091	15,429	0	6,211	7,855	7,586	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-61. Total and federally financed R&D expenditures in the biological sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	3,970,981	3,866,146	3,735,014	3,535,554	2,565,775	2,501,500	2,448,204	2,310,172
1 The Rockefeller Univ	95,757	86,086	62,780	60,971	30,962	32,723	31,735	26,943
2 Harvard University	85,984	84,081	82,766e	78,057	71,178	69,578	65,373	65,549
3 Baylor Col of Medicine	85,229	91,170	90,336	86,442	56,642	60,925	60,164	57,104
4 Washington University	81,179	77,278	71,539	66,816	61,519	57,978	56,106	49,576
5 U of Washington	80,653	75,727	89,824	85,386	68,981	63,820	77,961	72,981
6 U of Pennsylvania	74,468	67,228	56,634	49,676	59,160	54,616	47,137	40,273
7 Texas A&M University	73,982	76,878	78,003	73,299	14,897	16,392	18,084	17,037
8 U WI Madison	71,681	69,826	73,922	66,151	39,104	36,604	40,487	35,629
9 Yale University	71,417	66,494	65,490	64,733	56,911	54,693	52,049	50,540
10 Johns Hopkins Univ	69,186	65,692	62,903	61,227	54,846	55,637	52,339	48,554
Total, 1st 10 institutions	789,536	760,460	734,197	692,758	514,200	502,966	501,435	464,186
11 University of Michigan	68,429	72,862	67,061	64,509	46,486	53,600	46,271	43,227
12 U of NC Chapel Hill	67,728	67,242	66,988	62,353	51,406	50,790	50,858	47,640
13 Case Western Reserve U	65,334	63,720	61,118	55,217	53,592	52,120	47,516	43,562
14 Columbia University	58,347	58,032	58,783	55,257	48,345	46,933	48,680	49,074
15 U TX SW Med Ctr Dallas	57,223	51,101	47,086	48,994	38,544	36,269	31,840	31,591
16 University of Georgia	57,002	58,459	51,250	48,993	27,379	27,617	27,915	27,949
17 Tufts University	53,902	55,495	53,300	47,490e	38,386	38,247	37,984	33,558
18 U TX MD Anderson Cncr	52,929	54,416	54,764	52,798	20,211	20,660	19,516	18,296
19 Vanderbilt University	50,517	48,729	45,635	38,220	42,082	40,708	39,026	34,147
20 Cornell University	47,432	47,670	46,479	43,045	27,213	27,503	27,604	25,505
Total, 1st 20 institutions	1,368,379	1,338,186	1,266,661	1,209,634	907,844	897,413	878,645	818,735
21 University of Arizona	46,851	43,549	30,763	32,776	25,248	22,850	18,449	20,314
22 U CA Berkeley	46,823	43,302	40,801	37,718	37,843	33,454	32,583	29,592
23 U of Alabama Birmingham	45,692	43,566	41,754	45,018	35,906	32,247	31,006	31,493
24 SUNY Albany	44,725	19,432	22,227	19,869	37,400	14,323	13,299	15,717
25 University of Minnesota	44,279	43,890	41,984	44,563	28,772	27,860	26,376	26,412
26 Purdue University	43,824	44,935	40,246	37,163	20,026	20,181	17,107	14,792
27 U CA Irvine	41,790	36,666	38,919	36,480	30,306	28,944	31,610	29,056
28 Louisiana St U, All Camp	41,588	41,413	35,697	35,506	22,993	24,513	21,633	21,442
29 U Med & Dent NJ	41,253	39,349	36,479	28,894	19,702	16,511	16,053	13,523
30 Northwestern University	40,760	36,554	33,790	32,257	26,349	24,251	24,356	24,566
Total, 1st 30 institutions	1,805,964	1,730,842	1,649,321	1,559,878	1,192,389	1,142,547	1,111,117	1,045,642
31 Pennsylvania State U	40,491	39,561	38,826	37,041	25,677	26,054	25,151	24,027
32 Michigan State University	39,366	39,718	31,796	34,609	22,840	23,104	18,368	16,126
33 New York University	38,676	39,328	37,892	35,480	29,443	29,343	26,270	26,584
34 Thomas Jefferson U	37,474	34,596	29,923	27,242	31,257	29,338	25,905	23,140
35 NC State U Raleigh	37,116	39,722	40,254	38,290	13,358	15,237	15,153	14,860
36 University of Kansas	36,775	30,627	32,062	29,044	16,246	13,344	13,911	12,696
37 Ohio State University	36,717	39,737	39,337	35,365	23,204	23,121	23,113	20,651
38 University of Colorado	36,427	36,384	33,789	23,348	28,302	28,043	26,092	18,129
39 MA Institute of Tech	36,104	35,398	37,690	35,792	29,882	31,514	32,121	31,601
40 SUNY Buffalo	36,007	40,330	39,739	39,347	25,605	22,168	31,205	33,449
Total, 1st 40 institutions	2,181,117	2,106,243	2,010,629	1,895,436	1,438,203	1,383,813	1,348,406	1,266,905
41 Duke University	35,819	38,094	38,882	35,441	28,942	31,593	30,801	28,873
42 SUNY Stony Brook	35,557	34,488	32,198	30,221	23,086	22,613	21,373	20,695
43 Rutgers the State U NJ	34,800	37,659	36,704	35,594	10,122	11,990	11,877	10,822
44 University of Florida	33,571	26,643	25,574	24,506	17,350	16,436	18,000	16,076
45 University of Cincinnati	33,198	36,254	36,703	36,636	21,652	24,257	24,489	25,719
46 University of Chicago	33,029	22,993	27,436	26,858	28,469	19,718	23,811	23,754
47 University of Rochester	31,883	32,811	31,923	32,681	26,461	28,708	27,464	28,574
48 Indiana University	31,579	26,433	24,146	22,635	20,661	18,345	15,152	14,469
49 University of Connecticut	30,027	26,790	26,651	26,696	16,464	14,953	14,077	15,140
50 Emory University	29,654	27,574	27,612	25,281	24,593	23,444	23,212	20,961
Total, 1st 50 institutions	2,510,234	2,415,982	2,318,458	2,191,985	1,656,003	1,595,870	1,558,662	1,471,988

See explanatory information and SOURCE at end of table.

Table B-61. Total and federally financed R&D expenditures in the biological sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 Washington State U	29,619	27,240	27,397	27,065	13,997	13,103	12,571	12,628
52 U TX Hlth Sci Ctr San Ant	28,612	30,638	22,576	20,739	20,748	20,415	20,140	18,501
53 Iowa State University	27,422	30,288	30,341	33,355	8,020	9,680	11,122	12,269
54 U of Iowa	27,391	25,505	24,058	23,652	18,067	17,344	17,503	17,720
55 University of Utah	26,829	24,998	26,219	24,737	22,654	20,148	22,007	20,980
56 U of Missouri Columbia	26,612	26,156	22,941	27,773	10,530	9,813	8,213	10,297
57 U of NE Med Ctr Omaha	25,774	25,182	21,446e	19,797	8,917	9,159	8,428	6,497
58 University of Virginia	25,733	28,329	27,812	24,839	20,679	23,086	22,036	18,819
59 U of Illinois Urbana	25,003	22,610	22,674	21,275	17,576	16,631	16,153	15,274
60 Virginia Commonwealth U	24,509	24,437	23,983	25,135	17,357	18,133	17,891	18,116
Total, 1st 60 institutions	2,777,738	2,681,365	2,567,905	2,440,352	1,814,548	1,753,382	1,714,726	1,623,089
61 California Inst of Tech	24,137	27,462	25,670	21,982	20,351	21,635	20,863	18,782
62 Yeshiva University	23,772	24,632i	24,150	23,305	20,551	18,754i	18,387	18,644
63 University of IL Chicago	23,469	23,492	23,302	22,229	13,986	14,102	14,056	12,287
64 Colorado State University	23,366	25,580	26,356	21,437	14,559	17,101	16,323	15,918
65 CUNY Mt Sinai Sch Med	23,239	19,012	18,811	17,195	16,350	15,740	16,115	14,411
66 U of Tennessee System	22,344	22,512	20,864	19,434	15,821	16,039	15,790	14,020
67 University of Oklahoma	22,121	17,890	15,789	15,057	11,156	8,785	7,391	6,853
68 Temple University	20,449	19,458	21,237	18,955	10,869	10,834	10,181	10,482
69 U CA San Diego	20,249	15,176	13,903	13,701	16,849	14,054	12,705	12,315
70 Allegheny U of Hlth Sci	18,893	16,190	19,550	26,644	14,796	13,137	13,390	18,692
Total, 1st 70 institutions	2,999,777	2,892,769	2,777,537	2,640,291	1,969,836	1,903,563	1,859,927	1,765,493
71 Princeton University	18,840	17,175	16,239	15,481	11,985	9,363	10,058	9,083
72 Oregon Health Sciences U	18,534i	17,413i	15,026	14,622i	13,750i	13,239i	11,685	11,474i
73 Loyola U of Chicago	18,501	16,863i	15,218	6,180	10,526	10,068i	9,608	3,457
74 U MA Worcester	18,338	19,740	19,398	19,364	15,461	17,237	17,088	16,227
75 U of MD Baltimore	18,331	16,181	16,630	16,766	9,782	8,939	8,959	8,033
76 Oregon State University	17,982	18,103	18,582	19,850	9,511	8,080	8,945	9,545
77 University of Vermont	17,820	18,443	17,617	17,920	12,913	13,631	13,933	13,235
78 Brandeis University	17,513	17,360	15,807	16,766	12,497	12,538	11,385	12,203
79 UT-Houston Hlth Sci Ctr	16,964	16,010	18,432	14,302	12,633	11,950	14,828	11,482
80 U CA Los Angeles	16,444	18,084	18,791	19,356	13,771	14,874	14,446	15,208
Total, 1st 80 institutions	3,179,044	3,068,141	2,949,277	2,800,898	2,092,665	2,023,482	1,980,862	1,875,440
81 University of New Mexico	15,644	16,599	14,642	13,650	11,125	11,255	10,024	8,864
82 U TX Austin	15,040	13,712	15,323	13,032	10,901	10,272	10,662	8,595
83 University of Miami	14,833	15,371	15,140	16,285	12,848	12,871	12,448	13,831
84 Kansas State University	14,030	12,510	12,128	10,762	6,831	5,853	5,538	5,020
85 Unif Svcs U of Hlth Sci	12,999	10,920	9,702	6,977	8,685	7,128	6,530	5,048
86 Medical Col of Georgia	12,668	14,135	14,949	15,839	5,214	5,932	6,135	6,404
87 U of Nebraska Lincoln	12,226	11,373	10,713	12,824	4,212	3,668	3,045	2,984
88 Morehouse School of Med	12,007	7,179	6,838	6,770	10,686	6,685	6,367	6,304
89 Oklahoma State University	11,915	13,617	11,177	9,228	4,391	4,118	3,303	2,989
90 U of Maine	11,818	8,158	7,670	6,571	6,466	6,349	3,324	3,116
Total, 1st 90 institutions	3,312,224	3,191,715	3,067,559	2,912,836	2,174,024	2,097,613	2,048,238	1,938,595
91 Med U of South Carolina	11,803	12,765	11,355	12,866	9,106	9,199	7,790	6,871
92 U MD Biotechnology Inst	11,578	8,813	6,955	--	2,793	2,738	2,200	--
93 Georgetown University	11,282	12,056	12,488	15,521	9,188	9,642	10,142	11,953
94 Clemson University	11,093	10,503	8,276	10,192	3,675	3,641	2,608	3,022
95 Univ of Hawaii Manoa	10,754	10,717	10,385	10,123	6,120	5,999	5,910	5,684
96 Stanford University	10,669	11,137	11,623	10,030	8,914	9,433	9,985	8,362
97 University of Oregon	9,942	8,685	9,214	9,865	8,408	6,845	7,218	7,755
98 U of Alaska Fairbanks	9,804i	9,499i	9,914i	8,331i	3,057i	3,755i	4,106i	4,191i
99 Florida State University	9,519	8,427	7,401	6,225	4,918	4,052	3,204	3,278
100 Med Col of Ohio Toledo	9,499	9,909	9,212	8,259	7,751	8,073	7,674	6,430
Total, 1st 100 institutions	3,418,167	3,294,226	3,164,382	3,004,248	2,237,954	2,160,990	2,109,075	1,996,141
Total, all other sampled insts	487,324	512,878	516,408	531,306	299,757	313,404	312,758	314,031
Estimated total non-sampled insts	65,490	59,042	54,224	0	28,064	27,106	26,371	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-62. Total and federally financed R&D expenditures in the medical sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	6,354,922	6,072,206	5,639,057	5,323,726	3,996,029	3,829,094	3,537,351	3,369,501
1 U CA San Francisco	320,757	329,742	312,393	314,599	221,864	224,271	213,252	210,148
2 U CA Los Angeles	219,548	166,620	155,395	156,060	143,838	106,346	103,284	104,672
3 Johns Hopkins Univ	203,375	198,965	163,372	147,233	158,357	156,737	134,325	121,895
4 U of Washington	163,576	161,354	114,424	107,340	119,752	113,775	83,175	83,030
5 U CA San Diego	159,294	149,869	142,821	139,794	126,292	122,183	117,976	113,701
6 Duke University	158,088	135,568	129,216	118,024	85,907	83,443	76,756	69,746
7 University of Pittsburgh	148,581	143,240	145,346	140,602	119,929	115,832	120,495	114,126
8 University of Minnesota	141,957	136,409	116,123	126,164	95,649	89,585	76,862	76,825
9 University of Michigan	141,748	136,096	123,029	123,114	86,399	82,009	77,659	74,442
10 U WI Madison	139,136	134,111	118,871	114,432	70,926	70,036	63,195	61,306
Total, 1st 10 institutions	1,796,060	1,691,974	1,520,990	1,487,362	1,228,913	1,164,217	1,066,979	1,029,891
11 U of Pennsylvania	135,127	128,453	120,609	117,363	100,931	94,615	90,033	86,023
12 Stanford University	131,024	135,495	140,159	131,734	109,909	111,924	114,002	104,675
13 Yale University	126,001	122,663	115,665	115,142	92,003	88,793	86,953	85,118
14 U of Southern California	121,104	105,546	101,676	89,936	76,323	67,269	62,714	59,388
15 U of Alabama Birmingham	111,179	102,167	90,936	79,622	82,208	69,669	64,416	59,854
16 Washington University	107,633	101,339	93,906	88,023	71,038	65,968	62,363	61,646
17 Cornell University	104,182	100,463	94,636	89,522	61,359	64,462	61,148	57,859
18 U of Iowa	101,434	92,461	88,214	82,494	62,411	60,267	57,124	52,666
19 Baylor Col of Medicine	99,384	99,205	96,529	85,810	35,652	33,272	32,240	30,519
20 U of MD Baltimore	97,766	86,299	88,693	89,418	52,168	47,677	47,782	42,845
Total, 1st 20 institutions	2,930,894	2,766,065	2,552,013	2,456,426	1,972,915	1,868,133	1,745,754	1,670,484
21 Columbia University	92,565	94,989	88,466	76,947	76,048	78,833	74,454	67,032
22 Harvard University	92,294	90,012	85,326e	81,634	58,532	61,177	56,803	57,460
23 Georgetown University	89,366	78,434	58,121	47,836	64,997	56,823	36,810	29,178
24 Emory University	83,002	85,420	73,064	61,167	47,361	48,231	43,559	36,484
25 Wayne State University	81,331	76,026	66,918	56,654	35,670	36,228	34,135	29,433
26 University of Colorado	75,876	69,281	68,514	63,634	59,285	55,420	50,855	49,265
27 University of Miami	74,202	71,506	68,779	67,274	48,739	47,419	45,802	44,321
28 U TX Med Br Galveston	73,707	72,419	72,503	67,852	38,323	33,204	32,775	30,555
29 U TX SW Med Ctr Dallas	72,753	74,200	71,312	65,264	42,781	42,623	39,628	36,352
30 Wake Forest University	72,320	66,345	50,810	56,171	53,451	49,233	35,607	41,065
Total, 1st 30 institutions	3,738,310	3,544,697	3,255,826	3,100,859	2,498,102	2,377,324	2,196,182	2,091,629
31 CUNY Mt Sinai Sch Med	69,166	72,996	67,368	58,142	45,249	43,251	39,073	35,389
32 Boston University	68,016	66,860	59,025	59,123	54,743	53,097	47,341	47,397
33 U of NC Chapel Hill	67,640	70,259	69,892	61,657	52,578	55,391	54,591	46,863
34 U CA Davis	64,807	65,773	61,655	59,920	41,660	44,143	41,766	40,897
35 UT-Houston Hlth Sci Ctr	63,931	55,758	43,636	41,632	48,368	42,330	30,577	26,293
36 U TX MD Anderson Cncr	62,938	62,307	62,385	69,200	20,498	21,545	20,056	19,769
37 University of Chicago	61,360	61,435	51,534	45,345	51,379	50,543	42,330	37,307
38 Northwestern University	60,163	52,568	50,318	39,300	29,944	24,026	20,412	15,981
39 Indiana University	59,155	55,110	54,209	49,958	33,469	29,445	33,172	30,588
40 University of IL Chicago	58,920	59,331	53,832	48,497	26,762	28,159	27,311	24,471
Total, 1st 40 institutions	4,374,406	4,167,094	3,829,680	3,633,633	2,902,752	2,769,254	2,552,811	2,416,584
41 U Med & Dent NJ	57,282	57,016	50,387	47,516	27,803	29,223	24,634	22,001
42 University of Virginia	56,033	55,134	47,691	41,246	25,012	26,620	24,685	22,336
43 University of Rochester	55,063	58,586	52,017	52,082	37,575	40,080	35,286	36,860
44 U of South Florida	54,903	52,620	54,116	49,067	10,167	9,644	6,752	7,055
45 U TX Hlth Sci Ctr San Ant	54,416	56,698	60,959	54,500	30,455	34,018	31,531	29,966
46 Oregon Health Sciences U	52,123i	48,109i	40,815	38,109i	29,183i	28,096i	24,799	24,063i
47 University of Arizona	51,353	51,357	44,804	40,191	32,658	33,007	27,206	24,443
48 Ohio State University	49,981	52,382	44,421	43,904	28,564	27,636	23,915	24,687
49 New York University	49,825	53,363	51,132	48,600	29,632	32,732	31,517	33,420
50 Yeshiva University	47,543	49,264i	48,298	46,610	38,166	37,508i	36,773	37,288
Total, 1st 50 institutions	4,902,928	4,701,623	4,324,320	4,095,458	3,191,967	3,067,818	2,819,909	2,678,703

See explanatory information and SOURCE at end of table.

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Table B-62. Total and federally financed R&D expenditures in the medical sciences at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 University of Kentucky	46,568	44,194	41,724	34,709	27,624	26,822	26,057	21,010
52 Virginia Commonwealth U	44,793	43,237	44,668	44,896	24,642	24,911	26,412	27,292
53 SUNY Buffalo	44,628	43,603	46,503	38,666	21,398	25,215	26,911	24,021
54 University of Florida	43,205	41,668	38,830	35,991	22,762	22,360	20,263	18,344
55 University of Connecticut	41,544	38,138	40,629	42,778	17,938	17,113	18,672	19,742
56 Case Western Reserve U	40,998	41,099	36,782	34,210	32,919	32,219	28,158	26,310
57 Medical Col of Wisconsin	39,787	37,102	38,195	32,622	29,003	26,122	24,223	20,945
58 University of Utah	39,448	39,358	36,078	38,272	32,528	31,010	27,188	30,100
59 Dartmouth College	39,034	37,882	41,670	44,908	28,985	29,458	30,331	33,369
60 Vanderbilt University	34,104	29,130	30,526	29,558	27,280	24,247	26,138	26,467
Total, 1st 60 institutions	5,317,037	5,097,034	4,719,925	4,472,068	3,457,046	3,327,295	3,074,262	2,926,303
61 U CA Irvine	32,011	34,832	31,183	30,406	11,823	12,243	10,532	11,609
62 University of Cincinnati	31,568	28,875	28,766	28,270	16,889	15,173	15,217	14,800
63 Thomas Jefferson U	31,460	30,581	26,557	23,456	20,009	19,470	16,861	14,770
64 Med U of South Carolina	30,745	34,913	27,667	25,963	20,381	18,379	14,020	11,355
65 Rush University	30,684	24,948	22,009	21,686	12,429	7,705	4,520	5,908
66 U CA Berkeley	29,585	21,235	34,104	28,820	13,082	11,150	9,911	8,464
67 SUNY Stony Brook	29,217	25,782	24,535	26,424	17,751	16,468	15,690	15,257
68 U of Tennessee System	26,544	26,847	23,947	24,091	13,758	13,642	12,691	12,223
69 U MA Worcester	25,196	22,911	22,740	21,719	23,130	18,120	16,419	16,258
70 U Arkansas Medical Sci	24,359	20,071	14,705	9,622	11,288	10,649	8,216	6,706
Total, 1st 70 institutions	5,608,406	5,368,029	4,976,138	4,712,525	3,617,586	3,470,294	3,198,339	3,043,653
71 George Washington U	24,208	18,514	14,746	10,328	12,105	10,879	9,332	6,619
72 Univ Svcs U of Hlth Sci	23,852	28,692	17,632	23,869	15,936	18,730	11,594	17,271
73 Tulane University	23,849	24,455	28,169	28,131	9,649	11,255	11,494	12,328
74 SUNY Hlth Sci Ctr Brklyn	23,606i	22,763	19,856	19,140	13,756i	13,252	11,871	12,431
75 Allegheny U of Hlth Sci	23,225	22,387	25,668	15,936	10,583	9,683	12,934	7,939
76 University of Oklahoma	23,168	19,961	18,684	17,033	9,650	7,344	6,805	5,843
77 Medical Col of Georgia	22,962	16,960	12,810	8,866	6,118	5,075	2,986	1,309
78 Pennsylvania State U	21,902	19,373	17,589	16,141	13,189	10,422	9,843	11,247
79 University of Vermont	21,041	20,028	20,808	19,867	11,901	12,159	13,489	12,926
80 U of Missouri Columbia	20,083	20,692	22,772	16,319	4,171	4,331	6,223	4,703
Total, 1st 80 institutions	5,836,302	5,581,854	5,174,872	4,888,155	3,724,644	3,573,424	3,294,910	3,136,269
81 Temple University	19,807	19,233	18,589	17,336	8,701	8,389	8,398	6,608
82 Brown University	19,402	16,178	15,917	15,830	12,750	11,564	11,012	11,241
83 Louisiana St U, All Camp	17,691	17,414	16,551	15,947	8,429	8,701	8,924	8,271
84 University of Georgia	16,998	16,526	15,931	14,517	2,452	2,844	2,916	2,656
85 U of NE Med Ctr Omaha	16,838	13,105	12,551	11,872	5,112	4,216	3,828	3,634
86 Loyola U of Chicago	16,407	15,192i	13,976	14,581	12,615	11,184i	9,754	9,091
87 C R Drew U of Med & Sci	16,386i	12,500	9,347	6,852	15,288i	10,500	7,674	6,483
88 Rutgers the State U NJ	16,311	15,782	14,275	13,123	6,987	7,223	6,956	5,979
89 U PR Med Sci Campus	15,005	17,354	17,765	14,622	12,191	12,433	11,973	9,775
90 U of South Carolina	13,887	11,632	13,398	8,764	7,256	6,027	6,064	4,339
Total, 1st 90 institutions	6,005,034	5,736,770	5,323,172	5,021,599	3,816,425	3,656,505	3,372,409	3,204,346
91 University of Kansas	13,735	20,724	18,302	15,332	4,653	8,608	8,002	7,671
92 University of Louisville	13,495	9,918	9,072	7,499	4,939	3,865	3,572	2,794
93 Saint Louis University	12,273	11,765	10,400	10,120	9,462	9,248	8,602	8,707
94 Eastern VA Med School	12,047	12,050	12,342	11,208	8,383	7,839	7,683	7,224
95 Michigan State University	11,638	12,253	14,213	15,360	5,928	6,033	7,201	7,157
96 San Diego St University	11,441	8,605	6,932	4,769	2,088	1,611	1,250	1,216
97 U Mississippi, All Camp	11,194	10,499	9,478	9,262	4,975	4,945	4,257	3,588
98 Texas A&M University	11,180	9,917	7,765	6,651	7,509	6,167	4,646	3,941
99 Purdue University	10,883	10,613	10,505	10,737	4,398	5,076	6,198	7,301
100 University of New Mexico	9,904	10,732	9,253	8,607	7,043	6,815	5,143	4,563
Total, 1st 100 institutions	6,122,824	5,853,846	5,431,434	5,121,144	3,875,803	3,716,712	3,428,963	3,258,508
Total, all other sampled insts	226,772	214,748	204,940	202,582	117,724	110,834	106,957	110,993
Estimated total non-sampled insts	5,326	3,612	2,683	0	2,502	1,548	1,431	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-63. Total and federally financed R&D expenditures in psychology at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	372,305	367,777	357,275	349,698	254,039	249,407	241,573	234,385
1 U WI Madison	14,989	13,257	11,540	10,749	11,671	10,196	8,870	8,718
2 University of Michigan	9,718	9,091	9,098	11,952	5,571	5,724	5,039	7,807
3 U of Washington	8,305	7,734	7,321	6,778	7,400	6,958	6,931	6,309
4 U CA Los Angeles	7,676	8,369	7,514	7,435	5,568	6,008	5,731	5,597
5 MA Institute of Tech	7,213	6,774	8,503	8,043	3,800	5,823	7,398	7,313
6 University of Minnesota	7,198	8,462	6,970	7,548	5,672	6,549	5,922	6,037
7 University of Colorado	7,119	7,205	7,423	8,006	4,835	4,657	5,004	5,361
8 SUNY Buffalo	6,998	6,303	5,607	5,051	6,417	1,958	1,659	1,181
9 Rutgers the State U NJ	6,943	6,824	6,830	6,927	3,502	3,436	2,833	3,003
10 Indiana University	6,846	6,586	5,248	4,704	4,660	4,405	4,182	3,500
Total, 1st 10 institutions	83,005	80,605	76,054	77,193	59,096	55,714	53,569	54,826
11 Pennsylvania State U	6,612	6,590	6,393	5,745	4,352	3,913	3,458	2,631
12 U CA Berkeley	6,331	7,149	6,617	6,870	4,334	4,735	4,455	4,465
13 University of Rochester	6,101	6,113	6,001	6,682	3,230	3,084	2,850	3,097
14 Princeton University	5,743	5,745	6,281	5,462	4,518	4,306	4,087	3,174
15 University of Georgia	5,697	6,386	6,004	4,310	2,206	3,030	2,589	1,658
16 University of Connecticut	5,655	7,063	7,440	7,241	2,670	2,993	2,979	3,038
17 U of Illinois Urbana	5,566	5,775	6,305	6,088	4,042	4,370	4,528	4,015
18 Carnegie Mellon U	5,291	5,341	5,625	4,918	3,780	3,542	3,778	3,429
19 Yale University	4,894	6,240	7,036	6,298	2,388	2,525	2,660	2,190
20 New York University	4,773	5,170	4,686	7,017	4,112	4,395	4,091	6,640
Total, 1st 20 institutions	139,668	142,177	138,442	137,824	94,728	92,607	89,044	89,163
21 Cornell University	4,757	4,246	3,670	3,321	2,252	2,043	1,585	1,483
22 U of South Florida	4,674	4,748	5,390	4,342	1,696	1,635	1,838	1,445
23 University of Oklahoma	4,580	4,267	3,307	2,803	1,354	1,025	1,934	833
24 Arizona State University	4,566	3,692	2,928	3,432	3,196	2,345	2,027	2,492
25 The University of Memphis	4,353	3,664	3,441	2,904	2,090	1,942	1,615	1,216
26 U TX Austin	4,347	3,273	3,961	3,364	3,255	2,583	3,265	2,651
27 Duke University	4,243	4,141	6,105	5,202	3,296	3,152	5,226	4,964
28 U CA San Diego	4,216	4,394	3,998	3,545	3,367	3,635	3,231	2,566
29 Temple University	4,167	4,793	4,416	4,906	3,103	3,891	3,475	3,867
30 U of NC Chapel Hill	4,048	3,682	2,727	2,441	3,798	3,475	2,356	2,305
Total, 1st 30 institutions	183,619	183,077	178,385	174,084	122,135	118,333	115,596	112,985
31 Georgia State University	3,812	2,793	2,998	2,969	2,049	1,676	1,807	1,681
32 Rush University	3,716	5,270	3,432	4,142	604	1,143	1,421	1,584
33 Oregon Health Sciences U	3,623i	3,444i	3,004	1,882i	3,116i	3,001i	2,649	1,551i
34 SUNY Binghamton	3,594	3,500	3,318	3,425	1,253	1,472	1,363	1,675
35 U CA Santa Barbara	3,564	2,545	2,852	3,155	2,589	1,795	2,142	2,479
36 University of IL Chicago	3,487	1,947	1,671	2,082	2,621	1,317	1,104	1,602
37 U of Rhode Island	3,471i	3,481i	3,450i	3,404i	3,382i	3,258i	3,073i	3,034i
38 San Diego St University	3,327	2,738	3,282	2,902	2,676	2,383	2,536	2,086
39 SUNY Albany	3,309	3,200	4,039	3,765	2,401	2,422	2,983	3,077
40 University of New Mexico	3,283	2,518	2,001	2,083	2,446	1,906	1,480	1,747
Total, 1st 40 institutions	218,805	214,513	208,432	203,893	145,272	138,706	136,154	133,501
41 Harvard University	3,173	3,166	3,117e	3,251	2,602	2,556	2,322	2,613
42 University of Pittsburgh	3,023	3,099	2,349	2,210	2,909	2,961	2,219	2,100
43 Ohio State University	2,982	2,294	1,517	1,118	1,961	1,690	1,076	610
44 University of Houston	2,865	3,022	2,973	2,865	2,036	2,320	2,209	2,142
45 U of Missouri Columbia	2,840	2,344	2,341	1,128	1,546	1,058	944	638
46 University of Virginia	2,706	2,602	3,084	2,823	2,150	2,131	2,512	2,151
47 Florida State University	2,659	3,004	2,925	2,233	1,346	1,337	1,408	1,244
48 SUNY Stony Brook	2,614	2,920	3,026	2,900	2,039	2,339	2,413	2,438
49 University of Miami	2,599	2,261	1,679	999	2,499	2,076	1,488	857
50 U MA Amherst	2,529	2,432	2,547	2,637	1,992	1,972	2,054	2,131
Total, 1st 50 institutions	246,795	241,657	233,990	226,057	166,352	159,146	154,799	150,425

See explanatory information and SOURCE at end of table.

Table B-63. Total and federally financed R&D expenditures in psychology at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 Vanderbilt University	2,453	3,051	2,980	2,021	1,994	2,437	2,387	1,643
52 U of Southern California	2,446	2,397	2,446	2,330	2,122	2,072	2,136	2,021
53 Georgia Institute of Tech	2,440	2,046	1,473	1,492	1,256	1,013	738	835
54 Purdue University	2,426	2,788	2,368	2,301	1,522	1,703	1,528	1,499
55 Colorado State University	2,394	2,361	2,111	2,141	2,095	2,173	1,934	1,937
56 Stanford University	2,392	2,979	3,710	3,559	2,030	2,541	3,182	3,068
57 Columbia University	2,387	2,350	2,386	2,173	2,222	2,203	2,287	2,173
58 Michigan State University	2,250	2,290	2,303	3,598	1,227	966	1,603	1,676
59 VA Polytech Inst & St U	2,191	2,010	2,031	1,662	1,473	1,262	1,248	738
60 University of Florida	2,176	2,473	2,519	2,564	1,444	1,260	1,445	1,206
Total, 1st 60 institutions	270,350	266,402	258,317	249,898	183,737	176,776	173,287	167,221
61 U of Pennsylvania	2,152	2,347	2,296	2,161	1,920	2,180	2,134	2,035
62 Brown University	2,140	1,392	1,607	2,111	1,403	869	1,033	1,430
63 U MD College Park	1,979	1,319	3,799	2,367	1,317	789	1,097	313
64 U CA Irvine	1,953	1,281	729	79	1,896	1,240	683	1
65 Texas Christian U	1,948	1,698	1,943	2,211	1,868	1,478	1,888	2,202
66 University of Arizona	1,939	1,991	2,546	2,122	744	1,172	1,072	834
67 U of Iowa	1,923	1,347	1,014	1,066	1,580	1,057	627	652
68 University of Oregon	1,920	1,592	2,017	2,007	1,281	1,133	1,322	1,376
69 Tufts University	1,918	1,805	1,650	1,089e	1,192	1,150	1,172	845
70 Wayne State University	1,886	1,835	2,221	1,872	1,155	1,311	1,470	1,420
Total, 1st 70 institutions	290,108	283,009	278,139	266,983	198,093	189,155	185,785	178,329
71 CUNY Hunter College	1,723	1,390	1,047	1,018	1,009	866	596	646
72 University of Chicago	1,685	1,444	1,308	1,192	1,347	1,104	853	861
73 U CA Davis	1,642	1,684	1,415	913	1,547	1,534	1,298	827
74 George Mason University	1,624	952	550	550	1,279	682	276	243
75 Texas A&M University	1,592	1,659	1,570	1,407	643	588	710	736
76 CA Sch Prof Psy Fresno	1,570	1,424i	1,279	616e	895	673i	452	74e
77 Emory University	1,529	1,407	1,399	989	1,245	1,158	1,130	729
78 Northwestern University	1,458*	1,588	1,713	1,867	1,196	1,375	1,539	1,538
79 U of South Carolina	1,419	1,483	1,309	1,518	1,348	1,111	959	1,023
80 U of Nebraska Lincoln	1,418	1,008	981	578	512	342	408	375
Total, 1st 80 institutions	305,768	297,048	290,710	277,631	209,114	198,588	194,006	185,381
81 Howard University	1,389	1,202	1,162	613	1,269	1,098	838	576
82 University of Denver	1,385	1,450	1,575	2,624	1,304	1,369	1,556	2,329
83 Florida Atlantic U	1,297	1,216	1,194	1,231	1,000	1,162	1,026	1,161
84 Kent State University	1,246i	1,162i	1,204	1,526	868i	731i	674	966
85 University of North Texas	1,234	813	503	300	503	218	0	18
86 University of Kansas	1,220	1,365	1,386	1,779	868	967	851	1,048
87 Brandeis University	1,212	1,041	1,578	1,385	1,003	893	1,336	1,163
88 U CA Riverside	1,174	1,292	1,044	753	1,151	1,179	967	668
89 Utah State University	1,166	1,887	1,664	1,706	801	1,431	1,327	1,349
90 Virginia Commonwealth U	1,141	1,730	1,361	996	372	961	700	560
Total, 1st 90 institutions	318,232	310,206	303,381	290,544	218,253	208,597	203,281	195,219
91 University of Delaware	1,106	796	582	572	608	472	363	415
92 SUNY Col Buffalo	1,075	442	497	640	1,059	376	497	640
93 Johns Hopkins Univ	1,031	1,004	1,021	844	1,004	957	949	783
94 Loyola U of Chicago	1,019	596i	175	156	594	297i	0	13
95 U of Alabama Birmingham	970	1,234	832	936	793	1,006	700	708
96 NC State U Raleigh	964	422	256	364	433	307	192	235
97 Syracuse University	960	968	975	1,330	442	469	468	778
98 University of Utah	953	888	1,033	1,346	779	700	771	1,020
99 U of Missouri St Louis	922	712	422	343	681	585	389	325
100 DePaul University	902	287	907	1,166	485	255	552	725
Total, 1st 100 institutions	328,134	317,555	310,081	298,241	225,131	214,021	208,162	200,861
Total, all other sampled insts	38,927	41,868	39,123	51,457	24,697	28,004	26,298	33,524
Estimated total non-sampled insts	5,244	8,354	8,071	0	4,211	7,382	7,113	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-64. R&D expenditures in the social sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Economics	Political science	Sociology	Other
Total, all institutions	1,103,711	1,019,499	953,908	896,337	270,687	185,397	234,583	413,044
1 University of Michigan	58,942	45,344	51,094	52,042	15,025	8,905	18,025	16,987
2 Harvard University	45,553	45,545	46,480e	41,102	12,644	25,880	342	6,687
3 U CA Berkeley	32,559	28,816	24,830	20,842	172	12,740	13,653	5,994
4 Pennsylvania State U	30,178	22,132	10,409	10,551	10,184	1,252	6,696	12,046
5 U MD College Park	29,880	20,862	31,490	22,038	8,196	4,286	1,419	15,979
6 U WI Madison	29,744	29,322	31,028	28,580	12,521	1,402	6,739	9,082
7 U of NC Chapel Hill	29,685	26,057	18,214	14,950	42	0	18,330	11,313
8 University of Georgia	26,422	24,019	22,232	20,782	10,066	1,936	1,375	13,045
9 U CA Los Angeles	24,962	21,598	18,307	17,739	3,749	352	746	20,115
10 U of Pennsylvania	23,532	24,485	21,291	17,192	3,747	331	4,584	14,870
Total, 1st 10 institutions	331,457	288,180	275,375	245,818	76,346	57,084	71,909	126,118
11 Texas A&M University	18,540	18,046	17,547	12,430	11,494	2,542	3,275	1,229
12 Purdue University	17,959	14,884	10,616	7,002	10,971	179	1,945	4,864
13 Ohio State University	17,826	16,558	16,218	19,935	2,830	2,455	954	11,587
14 U TX Austin	17,198	15,164	16,183	15,473	6,042	3,243	4,407	3,506
15 Rutgers the State U NJ	17,162	20,104	18,051	18,600	1,567	6,875	3,761	4,959
16 U of Illinois Urbana	16,108	18,545	15,535	12,909	5,335	5,234	153	5,386
17 MA Institute of Tech	14,408	10,637	8,179	8,540	5,745	1,656	0	7,007
18 U of Washington	12,947	7,401	10,675	9,834	183	4,195	736	7,833
19 Brandeis University	12,928	11,867	12,582	13,595	449	187	11,441	851
20 Washington State U	12,691	12,411	11,987	11,384	9,485	167	1,940	1,099
Total, 1st 20 institutions	489,224	433,797	412,948	375,520	130,447	83,817	100,521	174,439
21 Indiana University	12,674	11,807	5,275	4,785	364	7,804	1,911	2,595
22 University of Minnesota	12,373	11,597	11,852	12,121	7,451	1,396	1,199	2,327
23 University of Oklahoma	12,306	12,614	10,173	10,445	1,322	1,376	570	9,038
24 University of Connecticut	12,157	10,777	8,379	8,549	6,312	222	1,379	4,244
25 Johns Hopkins Univ	11,961	10,854	9,784	9,050	628i	48i	6,790i	4,495i
26 University of Arizona	11,661	9,537	8,666	8,685	3,872	196	5,482	2,111
27 Michigan State University	11,508	10,581	9,353	11,771	5,831	2,065	949	2,663
28 Iowa State University	11,355	10,616	10,438	11,636	3,684	436	7,009	226
29 Cornell University	11,235	11,350	9,958	10,425	4,970	37	1,309	4,919
30 Princeton University	10,855	9,767	10,099	9,137	1,938	7,666	1,129	122
Total, 1st 30 institutions	607,309	543,297	506,925	472,124	166,819	105,063	128,248	207,179
31 Duke University	10,849	10,569	13,576	10,168	1,764	4,794	2,620	1,671
32 U of Missouri Columbia	10,711	8,720	8,424	7,658	7,692	375	1,275	1,369
33 Temple University	9,697	8,406	9,546	10,373	252	515	7,815	1,115
34 Colorado State University	9,207	5,070	4,011	3,994	706	996	185	7,320
35 Arizona State University	8,347	8,526	7,551	8,163	1,873	1,475	236	4,763
36 U of South Carolina	7,755	8,469	7,446	5,942	1,115	1,491	1,448	3,701
37 University of New Mexico	7,684	6,692	5,174	4,903	297	1,183	436	5,768
38 University of IL Chicago	7,528	6,343	3,565	2,727	251	41	692	6,544
39 Louisiana St U, All Camp	7,225	6,537	5,440	5,803	3,079	338	1,017	2,791
40 U CA Santa Barbara	6,933	5,656	6,462	6,366	29	68	111	6,725
Total, 1st 40 institutions	693,245	618,285	578,120	538,221	183,877	116,339	144,083	248,946
41 Clemson University	6,886	5,956	5,861	6,636	2,699	2,356	94	1,737
42 U of Southern California	6,640	6,762	5,530	7,237	188	1,164	3,821	1,467
43 SUNY Albany	6,549	6,155	6,304	3,743	78	1,559	2,496	2,416
44 George Mason University	6,539	5,484	3,427	2,299	872	4,736	337	594
45 Columbia University	6,512	6,487	5,668	4,998	318	706	4,946	542
46 George Washington U	6,346	8,201	8,513	9,119	34	1,594	156	4,562
47 U of Iowa	6,218	5,177	5,233	4,682	239	1,416	1,884	2,679
48 Carnegie Mellon U	6,163	5,498	5,053	5,531	2,889	1,146	693	1,435
49 Georgia Institute of Tech	6,029	5,065	7,060	7,632	4,623	408	400	598
50 University of Colorado	5,993	4,766	3,833	3,791	776	272	2,996	1,949
Total, 1st 50 institutions	757,120	677,836	634,602	593,889	196,593	131,696	161,906	266,925

See explanatory information and SOURCE at end of table.

Table B-64. R&D expenditures in the social sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Economics	Political science	Sociology	Other
51 U WI Milwaukee	5,746	5,383	5,235	4,973	1,223	446	295	3,782
52 US Naval Postgrad School	5,730i	5,174	3,568	2,430	3,588i	1,389i	377i	376i
53 Stanford University	5,560	5,299	5,066	4,606	612	117	678	4,153
54 University of Miami	5,326	8,053	6,652	9,869	0	4	55	5,267
55 New York University	5,319	5,362	5,836	6,936	1,604	2,980	146	589
56 Cleveland State U	5,267i	5,080	4,458	3,660	6i	0i	277i	4,984i
57 U CA San Diego	5,066	4,251	4,115	3,102	705	352	1,809	2,200
58 U MA Boston	5,065	4,542	6,630	6,459	15	1,361	458	3,231
59 NC State U Raleigh	4,931	3,237	3,280	3,249	2,864	260	830	977
60 Wayne State University	4,923	4,422	3,661	2,660	187	5	823	3,908
Total, 1st 60 institutions	810,053	728,639	683,103	641,833	207,397	138,610	167,654	296,392
61 Northwestern University	4,821	3,974	1,824	2,134	691	456	341	3,333
62 U of Tennessee System	4,769	4,862	5,083	4,277	2,917	823	605	424
63 Oklahoma State University	4,700	4,662	4,123	5,084	3,366	85	500	749
64 University of Pittsburgh	4,699	6,614	5,272	6,836	623	565	204	3,307
65 University of Virginia	4,691	4,911	4,058	4,222	285	3,665	460	281
66 Georgia State University	4,619	4,330	2,406	1,872	2,280	73	2,125	141
67 SUNY Buffalo	4,593	5,267	4,009	3,333	0	55	535	4,003
68 Northern Illinois U	4,490	3,696	4,210	3,313	45	1,026	756	2,663
69 Portland State University	4,455	3,869	2,550	2,016	0	3	36	4,416
70 Mississippi State U	4,448	2,511	3,451	3,357	2,433	253	131	1,631
Total, 1st 70 institutions	856,338	773,335	720,089	678,277	220,037	145,614	173,347	317,340
71 Brown University	4,367	2,386	2,288	2,459	1,105	496	503	2,263
72 Case Western Reserve U	4,356	4,474	3,858	3,858	662	0	412	3,282
73 University of Florida	4,291	4,151	3,551	2,950	1,044	327	417	2,503
74 U CA Irvine	4,236	4,993	4,397	4,821	11	2,499	111	1,615
75 VA Polytech Inst & St U	4,177	4,153	4,950	5,066	803	474	335	2,565
76 New Sch for Socl Res	4,047i	3,922i	3,754	1,243	0i	379i	183i	3,485i
77 Emory University	4,004	5,916	7,413	6,325	1	3,621	263	119
78 Oregon State University	3,818	2,725	2,769	3,202	2,786	63	679	290
79 Tufts University	3,758	3,597	2,528	2,031e	0	3,321	384	53
80 Florida State University	3,697	4,534	4,082	3,092	132	561	625	2,379
Total, 1st 80 institutions	897,089	814,186	759,679	713,324	226,581	157,355	177,259	335,894
81 Northeast Louisiana U	3,546	4,234	3,787	2,438	2,781	0	765	0
82 U of Nebraska Lincoln	3,513	2,387	2,830	2,244	2,343	250	872	48
83 U of Alaska Fairbanks	3,430i	3,084i	3,163i	2,435i	201i	0i	1,937i	1,292i
84 U of New Hampshire	3,390	2,796	2,315	2,651	0	0	795	2,595
85 SUNY Stony Brook	3,369	4,840	3,481	2,257	151	735	414	2,069
86 Desert Research Institute	3,300	3,199	3,209	3,007	0	0	0	3,300
87 Utah State University	3,214	2,744	2,016	1,520	1,084	4	342	1,784
88 U Arkansas Main	3,151	2,945	3,041	2,806	425	186	449	2,091
89 Vanderbilt University	3,137	4,204	3,681	2,900	75	2,950	58	54
90 Texas Tech University	3,056	2,845	3,141	2,674	647	162	1,924	323
Total, 1st 90 institutions	930,195	847,464	790,343	738,256	234,288	161,642	184,815	349,450
91 North Dakota State U	2,951	2,583	2,176	1,767	2,914	32	5	0
92 University of Delaware	2,922	3,229	3,481	5,604	189	0	2,041	692
93 Univ of Hawaii Manoa	2,890	2,929	3,258	3,612	567	2	454	1,867
94 The University of Memphis	2,858	1,865	1,818	1,706	1,446	272	1,125	15
95 Georgetown University	2,791	2,738	3,557	2,780	104	446	1,471	770
96 Western Michigan U	2,740i	2,591	2,854	1,831	212i	788i	245i	1,495i
97 The University of Alabama	2,674	2,974	3,244	3,866	343	968	592	771
98 Florida International U	2,598	2,525	1,301	1,793	25	1,562	202	809
99 SUNY Binghamton	2,581	2,151	2,653	2,033	130	336	342	1,773
100 University of Kansas	2,519	2,970	2,305	1,170	1,247	75	571	626
Total, 1st 100 institutions	957,719	874,019	816,990	764,418	241,465	166,123	191,863	358,268
Total, all other sampled insts	126,545	130,413	124,622	131,919	27,105	16,170	35,776	47,494
Estimated total non-sampled insts	19,447	15,067	12,296	0	2,117	3,104	6,944	7,282

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-65. Federally financed R&D expenditures in the social sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Economics	Political science	Sociology	Other
Total, all institutions	427,181	389,223	359,317	338,359	91,043	62,735	121,943	151,459
1 Harvard University	25,660	24,063	17,346	11,182	7,165	17,074	130	1,291
2 University of Michigan	25,039	16,637	20,910	22,618	10,065	2,220	8,909	3,845
3 U of NC Chapel Hill	23,883	20,618	12,906	9,928	41	0	17,007	6,835
4 U WI Madison	15,356	15,037	16,504	15,393	6,148	181	4,334	4,693
5 Ohio State University	10,311	12,215	11,201	12,721	1,261	1,388	544	7,118
6 U of Pennsylvania	10,068	10,992	9,585	8,557	1,117	120	1,624	7,207
7 Pennsylvania State U	9,831	7,741	3,653	3,982	2,996	103	2,992	3,740
8 U MD College Park	9,265	6,774	8,606	9,565	850	554	736	7,125
9 Johns Hopkins Univ	8,301	4,627	4,431	4,776	177	43	5,406	2,675
10 Duke University	7,714	8,296	11,227	7,346	1,397	3,229	2,275	813
Total, 1st 10 institutions	145,428	127,000	116,369	106,068	31,217	24,912	43,957	45,342
11 U TX Austin	7,246	5,035	4,195	3,501	2,850	885	1,696	1,815
12 U of Washington	7,064	2,118	6,747	5,641	46	272	130	6,616
13 U CA Los Angeles	6,476	3,956	3,939	3,433	2,606	98	180	3,592
14 Rutgers the State U NJ	6,405	7,767	7,094	7,192	82	1,250	2,008	3,065
15 Michigan State University	6,132	4,971	5,177	5,485	4,455	496	550	631
16 Iowa State University	5,744	4,922	4,778	5,302	681	111	4,880	72
17 Brandeis University	5,671	4,278	4,995	4,991	153	2	5,455	61
18 US Naval Postgrad School	5,660	5,144	3,565	2,398	3,577	1,333	377	373
19 Washington State U	5,283	5,158	4,211	3,427	4,167	16	580	520
20 University of Miami	5,184	8,001	6,434	9,597	0	3	28	5,153
Total, 1st 20 institutions	206,293	178,350	167,504	157,035	49,834	29,378	59,841	67,240
21 Temple University	4,855	3,466	3,805	4,612	0	81	4,579	195
22 University of Arizona	4,654	3,284	2,780	2,555	938	23	2,398	1,295
23 Texas A&M University	4,602	4,428	3,397	2,160	1,308	1,108	1,708	478
24 U CA Santa Barbara	4,356	3,437	4,117	4,145	0	0	13	4,343
25 Columbia University	4,329	4,454	4,351	4,076	61	164	4,070	34
26 U CA Berkeley	4,320	4,231	4,218	5,798	6	1,656	1,772	886
27 U of Illinois Urbana	4,281	5,807	5,022	3,938	1,412	830	33	2,006
28 U of South Carolina	4,264	4,758	3,575	2,762	864	739	898	1,763
29 George Mason University	3,909	2,789	1,593	1,242	129	3,397	93	290
30 University of Oklahoma	3,702	4,958	4,150	4,483	72	105	230	3,295
Total, 1st 30 institutions	249,565	219,962	204,512	192,806	54,624	37,481	75,635	81,825
31 University of Colorado	3,578	2,665	2,281	2,392	493	217	2,065	803
32 SUNY Albany	3,348	2,683	2,225	2,623	53	375	986	1,934
33 SUNY Buffalo	3,278	1,257	1,163	374	0	23	532	2,723
34 U of Southern California	3,200	3,233	2,938	3,145	173	129	2,082	816
35 U of Missouri Columbia	3,151	2,954	2,650	2,176	2,745	0	362	44
36 Carnegie Mellon U	3,113	2,389	2,246	3,325	1,532	734	432	415
37 Georgia Institute of Tech	3,104	2,506	3,539	4,270	2,380	210	206	308
38 Desert Research Institute	3,100	3,010	3,106	2,814	0	0	0	3,100
39 Indiana University	3,004	3,782	1,191	1,274	76	1,792	819	317
40 MA Institute of Tech	2,941	3,257	3,639	3,435	844	896	0	1,201
Total, 1st 40 institutions	281,382	247,698	229,490	218,634	62,920	41,857	83,119	93,486
41 George Washington U	2,918	2,460	2,738	3,021	24	1,167	132	1,595
42 University of IL Chicago	2,895	1,795	1,030	423	179	0	417	2,299
43 Cornell University	2,793	2,271	2,025	2,496	1,471	3	463	856
44 Purdue University	2,733	3,075	2,224	2,120	1,708	37	676	312
45 Portland State University	2,592	2,000	1,601	1,272	0	0	21	2,571
46 U WI Milwaukee	2,562	2,349	2,332	2,133	100	212	32	2,218
47 University of Georgia	2,319	1,677	1,348	1,296	908	27	41	1,343
48 U of Rhode Island	2,284	2,200	2,077	2,051	2,284	0	0	0
49 Clemson University	2,282	2,064	1,847	1,968	894	781	31	576
50 Northwestern University	2,260	1,808	640	595	186	0	92	1,982
Total, 1st 50 institutions	307,020	269,397	247,352	236,009	70,674	44,084	85,024	107,238

See explanatory information and SOURCE at end of table.

Table B-65. Federally financed R&D expenditures in the social sciences at universities and colleges: fiscal years 1993-96 and by subfield for 1996

[Dollars in thousands]

Institution and ranking	1996	1995	1994	1993	1996, by subfield			
					Economics	Political science	Sociology	Other
51 U CA Irvine	2,247	3,186	2,798	2,767	0	1,654	95	498
52 Colorado State University	2,227	1,159	1,301	448	361	996	71	799
53 Princeton University	2,222	2,386	1,966	1,948	175	1,895	151	1
54 University of New Mexico	2,221	2,383	1,244	1,075	173	826	120	1,102
55 Arizona State University	2,183	2,343	2,214	2,822	97	343	22	1,721
56 University of Pittsburgh	2,154	1,248	1,463	3,734	278	253	173	1,450
57 Howard University	2,146	1,319	1,068	634	7	0	2,139	0
58 Florida International U	2,101	2,040	1,078	1,441	22	1,141	191	747
59 Vanderbilt University	2,046	2,642	2,261	1,674	64	1,977	0	5
60 University of Delaware	2,040	2,184	2,264	2,573	67	0	1,787	186
Total, 1st 60 institutions	328,607	290,287	265,009	255,125	71,918	53,169	89,773	113,747
61 University of Minnesota	1,849	1,846	2,747	3,070	1,103	334	388	24
62 Mississippi State U	1,781	1,178	1,020	1,026	633	20	60	1,068
63 U of Tennessee System	1,701	1,993	2,093	2,062	850	385	436	30
64 Utah State University	1,627	1,536	771	410	199	0	125	1,303
65 SUNY Stony Brook	1,624	2,335	1,236	998	99	278	119	1,128
66 University of Connecticut	1,598	1,500	1,412	951	547	111	788	152
67 Northeast Louisiana U	1,558	1,562	1,354	1,371	1,297	0	261	0
68 U CA San Diego	1,547	1,042	927	935	357	278	220	692
69 U of New Hampshire	1,517	1,217	1,253	1,944	0	0	392	1,125
70 Louisiana St U, All Camp	1,481	1,202	789	1,146	189	4	270	1,018
Total, 1st 70 institutions	344,890	305,698	278,611	269,038	77,192	54,579	92,832	120,287
71 The University of Alabama	1,412	1,415	845	394	7	754	137	514
72 Northern Arizona U	1,406	598	456	1,211	0	0	274	1,132
73 Case Western Reserve U	1,394	1,291	1,010	872	169	0	368	857
74 Georgetown University	1,383	1,861	1,934	1,444	89	12	998	284
75 Washington University	1,352	1,081	856	504	48	127	1,097	80
76 Western Illinois U	1,345	392	409	486i	410	187	706	42
77 U TX El Paso	1,281	1,175	1,159	646	311	0	970	0
78 VA Polytech Inst & St U	1,269	1,311	1,257	1,801	59	108	4	1,098
79 Texas Tech University	1,264	1,116	1,187	1,107	97	1	1,046	120
80 Syracuse University	1,254	1,450	1,454	671	18	20	156	1,060
Total, 1st 80 institutions	358,250	317,388	289,178	278,174	78,400	55,788	98,588	125,474
81 NC State U Raleigh	1,250	924	1,041	1,169	710	85	194	261
82 Stevens Inst of Tech	1,194	517	302	0	0	0	0	1,194
83 University of Kentucky	1,190	1,330	1,238	1,465	91	139	803	157
84 University of Florida	1,131	1,296	1,516	769	72	63	191	805
85 U of Iowa	1,092	1,205	1,354	1,130	139	461	416	76
86 U TX San Antonio	1,081	724i	367	222	0	0	0	1,081
87 Loma Linda University	1,015	1,050	0	0	0	0	0	1,015
88 Northern Illinois U	982	1,022	2,210	1,485	25	285	424	248
89 American University	959	721	857	963	11	854	32	62
90 Boston University	923	980	660	571	188	0	0	735
Total, 1st 90 institutions	369,067	327,157	298,723	285,948	79,636	57,675	100,648	131,108
91 Loyola U of Chicago	904	824i	744	932	0	83	656	165
92 U of South Florida	854	609	520	349	0	33	158	663
93 Yale University	849	871	834	957	625	53	0	171
94 California Inst of Tech	847	767	721	840	0	0	0	847
95 University of Denver	835	707	211	694	0	46	62	727
96 U of NC Greensboro	832	1,003	136	197	84	11	675	62
97 Brigham Young University	810i	660i	622	610	270i	0i	440i	100i
98 Oregon State University	807	934	957	1,215	478	58	171	100
99 New York University	806	1,362	1,144	845	401	156	15	234
100 U MA Boston	805	697	603	765	11	28	79	687
Total, 1st 100 institutions	377,416	335,591	305,215	293,352	81,505	58,143	102,904	134,864
Total, all other sampled insts.	39,288	47,299	48,776	45,007	8,309	3,856	14,309	12,814
Estimated total non-sampled insts.	10,477	6,333	5,326	0	1,229	736	4,730	3,781

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-66. Current fund expenditures for research equipment at universities and colleges, by science and engineering field and source of funds: fiscal years 1989, 1995, and 1996

[Dollars in thousands]

Field	Total			Federal			Non-Federal		
	1996	1995	1989	1996	1995	1989	1996	1995	1989
Total	1,220,523	1,234,290	986,107	729,087	728,946	595,386	491,437	505,345	390,721
Engineering, total	280,701	268,802	201,940	172,936	163,614	116,995	107,765	105,188	84,945
Aeronautical and astronautical	15,117	15,997	11,204	10,548	12,290	8,603	4,569	3,707	2,601
Chemical	23,054	21,870	19,291	13,191	12,898	10,075	9,863	8,972	9,216
Civil	26,612	21,813	15,600	12,842	9,554	8,658	13,770	12,259	6,942
Electrical	74,321	67,830	48,530	50,457	41,984	29,492	23,864	25,846	19,038
Mechanical	43,042	41,517	29,185	27,520	26,573	16,696	15,522	14,944	12,489
Metallurgical and materials[1]	32,475	27,891	--	17,033	14,081	--	15,442	13,810	--
Other, n.e.c.	66,081	71,883	78,130	41,346	46,234	43,471	24,735	25,649	34,659
All sciences, total	939,822	965,489	784,167	556,150	565,332	478,391	383,672	400,157	305,776
Physical sciences	242,503	237,499	180,800	179,937	177,525	133,203	62,566	59,974	47,597
Astronomy	20,561	22,567	10,065	14,651	13,748	6,976	5,910	8,819	3,089
Chemistry	93,944	80,646	75,520	66,596	56,977	53,062	27,349	23,669	22,458
Physics	104,402	112,595	83,042	80,121	92,179	65,053	24,280	20,416	17,989
Other, n.e.c.	23,596	21,692	12,173	18,569	14,622	8,112	5,027	7,070	4,061
Environmental sciences	88,707	81,117	67,468	60,731	55,555	44,588	27,976	25,562	22,880
Atmospheric	13,018	13,476	12,523	8,354	9,673	8,155	4,664	3,803	4,368
Earth sciences	31,518	26,588	25,590	21,069	16,202	16,137	10,449	10,386	9,453
Oceanography	27,614	26,300	17,925	22,418	19,663	13,382	5,196	6,637	4,543
Other, n.e.c.	16,557	14,753	11,430	8,891	10,017	6,914	7,667	4,736	4,516
Mathematical sciences	12,696	14,425	10,266	9,361	9,217	6,939	3,335	5,208	3,327
Computer sciences	71,407	76,328	43,010	49,666	48,077	30,926	21,741	28,251	12,084
Life sciences	444,568	463,184	430,996	221,668	224,782	237,782	222,900	238,402	193,214
Agricultural sciences	62,240	63,183	58,761	18,147	20,113	18,129	44,094	43,069	40,632
Biological sciences	180,266	191,820	175,243	105,127	107,271	110,305	75,138	84,549	64,938
Medical sciences	183,169	185,714	176,743	91,152	89,576	97,851	92,018	96,138	78,892
Other, n.e.c.	18,893	22,467	20,249	7,243	7,821	11,497	11,650	14,646	8,752
Psychology	12,012	12,266	10,635	7,473	7,886	6,938	4,539	4,380	3,697
Social sciences	25,162	27,718	14,496	9,762	10,699	4,864	15,400	17,018	9,632
Economics	6,246	7,555	4,110	2,397	2,815	1,060	3,849	4,740	3,050
Political science	3,638	3,271	1,629	1,048	1,155	375	2,590	2,116	1,254
Sociology	4,188	4,123	3,024	2,068	1,893	1,148	2,120	2,230	1,876
Other, n.e.c.	11,090	12,769	5,733	4,249	4,836	2,281	6,841	7,933	3,452
Other sciences, n.e.c.	42,768	52,952	26,496	17,552	31,591	13,151	25,216	21,362	13,345

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Table B-67. Current fund expenditures for research equipment at doctorate-granting institutions, by science and engineering field and source of funds: fiscal years 1989, 1995, and 1996

[Dollars in thousands]

Field	Total			Federal			Non-Federal		
	1996	1995	1989	1996	1995	1989	1996	1995	1989
Total	1,170,207	1,191,746	965,010	698,785	706,686	583,550	471,422	485,060	381,460
Engineering, total	275,484	264,219	198,158	169,220	159,943	114,751	106,264	104,276	83,407
Aeronautical and astronautical	15,047	15,857	10,996	10,478	12,150	8,398	4,569	3,707	2,598
Chemical	22,881	21,812	19,136	13,025	12,851	9,963	9,856	8,961	9,173
Civil	26,393	21,345	15,070	12,785	9,201	8,267	13,608	12,144	6,803
Electrical	72,117	66,885	47,488	49,030	41,187	29,111	23,087	25,698	18,377
Mechanical	41,362	40,233	28,507	26,185	25,482	16,208	15,177	14,751	12,299
Metallurgical and materials[1]	32,450	27,891	--	17,015	14,081	--	15,435	13,810	--
Other, n.e.c.	65,234	70,196	76,961	40,702	44,991	42,804	24,532	25,205	34,157
All sciences, total	894,723	927,527	766,852	529,565	546,743	468,799	365,158	380,784	298,053
Physical sciences	226,333	227,017	174,641	168,593	170,842	129,457	57,740	56,175	45,184
Astronomy	20,263	21,970	9,951	14,482	13,429	6,900	5,781	8,541	3,051
Chemistry	82,605	74,124	72,083	58,349	52,357	50,995	24,256	21,767	21,088
Physics	99,897	109,502	80,547	77,199	90,445	63,504	22,698	19,057	17,043
Other, n.e.c.	23,568	21,421	12,060	18,563	14,611	8,058	5,005	6,810	4,002
Environmental sciences	82,125	77,728	66,170	59,289	54,911	43,907	22,836	22,817	22,263
Atmospheric	12,964	13,450	12,435	8,300	9,658	8,114	4,664	3,792	4,321
Earth sciences	29,367	24,442	24,877	20,030	15,805	15,820	9,337	8,637	9,057
Oceanography	27,310	25,616	17,673	22,358	19,498	13,200	4,952	6,118	4,473
Other, n.e.c.	12,484	14,220	11,185	8,601	9,950	6,773	3,883	4,270	4,412
Mathematical sciences	11,164	12,872	9,630	8,171	8,444	6,640	2,993	4,428	2,990
Computer sciences	67,960	74,071	42,311	46,362	46,759	30,663	21,598	27,312	11,648
Life sciences	430,242	451,145	424,133	213,563	217,216	233,843	216,679	233,929	190,290
Agricultural sciences	59,571	60,720	56,381	15,877	18,133	16,614	43,694	42,587	39,767
Biological sciences	169,433	182,831	171,267	99,884	102,083	108,254	69,549	80,748	63,013
Medical sciences	182,396	185,193	176,391	90,609	89,211	97,592	91,787	95,982	78,799
Other, n.e.c.	18,842	22,401	20,094	7,193	7,789	11,383	11,649	14,612	8,711
Psychology	11,222	11,526	10,025	7,222	7,342	6,574	4,000	4,184	3,451
Social sciences	23,838	25,231	13,660	9,130	9,712	4,635	14,708	15,519	9,025
Economics	6,108	6,729	3,886	2,320	2,475	957	3,788	4,254	2,929
Political science	3,482	3,100	1,566	1,034	1,145	345	2,448	1,955	1,221
Sociology	3,955	3,850	2,861	1,941	1,716	1,101	2,014	2,134	1,760
Other, n.e.c.	10,293	11,552	5,347	3,835	4,376	2,232	6,458	7,176	3,115
Other sciences, n.e.c.	41,839	47,937	26,282	17,235	31,517	13,080	24,604	16,420	13,202

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

Table B-68. Current fund expenditures for research equipment at universities and colleges, by science and engineering field, source of funds, and type of control: fiscal year 1996

[Dollars in thousands]

Field	Total			Federal			Non-Federal		
	Total	Public	Private	Total	Public	Private	Total	Public	Private
Total	1,220,523	789,667	430,856	729,087	420,064	309,023	491,437	369,603	121,834
Engineering, total	280,701	190,176	90,525	172,936	104,694	68,242	107,765	85,481	22,283
Aeronautical and astronautical	15,117	10,422	4,695	10,548	7,013	3,535	4,569	3,409	1,160
Chemical	23,054	17,259	5,795	13,191	9,437	3,754	9,863	7,822	2,041
Civil	26,612	20,654	5,958	12,842	8,830	4,012	13,770	11,824	1,946
Electrical	74,321	49,080	25,241	50,457	30,023	20,434	23,864	19,057	4,807
Mechanical	43,042	28,210	14,832	27,520	16,016	11,504	15,522	12,194	3,328
Metallurgical and materials	32,475	23,095	9,380	17,033	10,226	6,807	15,442	12,869	2,573
Other, n.e.c.	66,081	41,456	24,625	41,346	23,149	18,197	24,735	18,307	6,428
All sciences, total	939,822	599,491	340,331	556,150	315,370	240,781	383,672	284,122	99,550
Physical sciences	242,503	133,035	109,467	179,937	87,679	92,257	62,566	45,356	17,210
Astronomy	20,561	10,125	10,436	14,651	5,463	9,187	5,910	4,662	1,249
Chemistry	93,944	55,785	38,159	66,596	35,791	30,805	27,349	19,994	7,354
Physics	104,402	55,552	48,850	80,121	39,088	41,033	24,280	16,464	7,816
Other, n.e.c.	23,596	11,573	12,023	18,569	7,337	11,232	5,027	4,236	791
Environmental sciences	88,707	67,440	21,267	60,731	42,751	17,981	27,976	24,689	3,286
Atmospheric	13,018	11,058	1,960	8,354	6,577	1,777	4,664	4,481	183
Earth sciences	31,518	20,060	11,458	21,069	11,270	9,798	10,449	8,790	1,660
Oceanography	27,614	25,069	2,546	22,418	20,378	2,040	5,196	4,690	506
Other, n.e.c.	16,557	11,253	5,304	8,891	4,525	4,366	7,667	6,729	938
Mathematical sciences	12,696	8,781	3,915	9,361	5,994	3,367	3,335	2,787	548
Computer sciences	71,407	35,123	36,283	49,666	20,536	29,130	21,741	14,588	7,153
Life sciences	444,568	301,961	142,607	221,668	132,573	89,096	222,900	169,388	53,511
Agricultural sciences	62,240	60,138	2,102	18,147	17,055	1,092	44,094	43,084	1,010
Biological sciences	180,266	119,643	60,622	105,127	62,439	42,688	75,138	57,204	17,934
Medical sciences	183,169	110,769	72,400	91,152	49,785	41,367	92,018	60,984	31,033
Other, n.e.c.	18,893	11,410	7,483	7,243	3,294	3,949	11,650	8,116	3,534
Psychology	12,012	8,924	3,088	7,473	5,255	2,218	4,539	3,669	870
Social sciences	25,162	19,720	5,441	9,762	7,872	1,890	15,400	11,848	3,552
Economics	6,246	5,058	1,188	2,397	2,002	395	3,849	3,056	793
Political science	3,638	2,687	952	1,048	922	126	2,590	1,765	826
Sociology	4,188	3,248	940	2,068	1,547	520	2,120	1,701	419
Other, n.e.c.	11,090	8,727	2,363	4,249	3,401	849	6,841	5,327	1,514
Other sciences, n.e.c.	42,768	24,507	18,261	17,552	12,711	4,842	25,216	11,796	13,420

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

AVAILABLE

Table B-69. Total and federally financed current fund expenditures for research equipment at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	1,220,523	1,234,290	1,104,244	1,039,264	729,087	728,946	667,703	636,296
1 Stanford University	38,748	21,279	15,039	16,317	35,342	19,009	12,761	15,204
2 MA Institute of Tech	37,523	43,841	25,605	26,629	30,844	37,868	19,705	20,795
3 U WI Madison	31,180	32,102	33,093	26,887	15,814	17,960	18,073	13,884
4 Johns Hopkins Univ	30,463	28,342 i	26,572 i	23,480	17,191	25,643 i	24,258 i	21,552
5 U of Illinois Urbana	27,027	19,457	17,743	17,911	17,251	11,752	10,226	10,513
6 Cornell University	24,765	37,503	17,954	22,165	16,994	20,597	11,738	14,387
7 U of Washington	24,182	30,164	22,995	24,144	19,946	20,386	19,419	17,247
8 Georgia Institute of Tech	23,246	14,900	19,919	10,768	11,967	7,376	9,986	6,025
9 California Inst of Tech	21,830	13,719	13,266	13,726	20,805	12,712	12,077	12,564
10 Pennsylvania State U	21,092	22,520	19,121	17,008	12,003	13,999	9,777	10,595
Total, 1st 10 institutions	280,056	263,827	211,307	199,035	198,157	187,302	148,020	142,766
11 Louisiana St U, All Camp	16,392	17,418	15,759	16,891	3,463	4,195	3,245	5,691
12 Texas A&M University	15,709	16,624	15,311	14,979	6,527	7,053	7,465	6,223
13 U MD College Park	15,043	16,842	10,358	8,325	6,345	6,917	4,624	3,870
14 University of Georgia	14,851	15,755	13,371	11,373	3,518	2,939	2,461	4,238
15 University of Michigan	14,712	18,981	18,831	16,602	8,942	10,164	11,504	10,370
16 U TX Austin	14,561	14,989	11,951	10,087	9,254	9,484	8,270	6,796
17 University of Minnesota	14,206	13,843	13,526	12,721	9,439	8,680	8,362	7,232
18 University of Arizona	14,184	14,687	12,990	12,815	8,519	8,182	7,409	7,495
19 Carnegie Mellon U	13,969	9,650	9,812	8,167	10,477	6,807	8,626	6,556
20 NC State U Raleigh	13,067	13,092	10,793	10,827	6,393	6,132	4,870	5,737
Total, 1st 20 institutions	426,750	415,708	344,009	321,822	271,034	257,855	214,856	206,974
21 Purdue University	12,727	13,958	10,988	8,051	6,621	8,716	6,118	5,530
22 Northwestern University	11,877	11,877	10,664	10,200	6,230	6,230	5,633	4,798
23 U of Southern California	11,682	10,228	10,660	12,137	9,260	9,025	8,969	10,633
24 University of Florida	11,576	10,472	8,925	7,605	3,588	3,021	2,994	2,609
25 Washington University	11,546	11,523	10,145	8,247	8,774	7,158	7,615	5,752
26 University of Colorado	11,427	10,469	13,219	9,599	8,025	7,354	9,046	6,609
27 Harvard University	11,139	10,130	9,792	10,241	8,437	7,990	7,101	7,210
28 University of Chicago	10,869	9,170	10,569	8,397	9,446	6,889	8,075	7,023
29 University of Rochester	10,396	11,487	11,709	11,190	8,408	9,300	9,735	9,256
30 Ohio State University	10,263	9,357	9,805	7,027	5,424	4,746	5,137	3,520
Total, 1st 30 institutions	540,252	524,379	450,485	414,516	345,247	328,284	285,279	269,914
31 Columbia University	10,145	9,892	11,500	10,942	8,386	8,472	9,629	9,322
32 Michigan State University	10,066	9,154	8,331	5,254	4,517	3,819	5,771	3,711
33 U of Pennsylvania	10,007	10,972	9,727	10,494	7,177	7,950	6,987	7,708
34 Indiana University	10,001	7,818	7,366	8,658	5,264	3,618	4,417	4,568
35 U of NC Chapel Hill	9,901	9,325	9,314	9,944	4,509	4,233	5,094	5,936
36 Duke University	9,780	7,856	9,127	11,424	6,266	5,033	5,585	7,394
37 University of New Mexico	9,659	26,687	6,608	4,897	7,139	24,445	4,651	3,014
38 University of Utah	9,622	6,344	6,548	7,316	8,073	4,896	5,338	5,934
39 U of Iowa	9,539	7,527	6,930	7,416	3,787	3,544	3,038	3,903
40 Florida State University	9,315	14,066	10,828	15,002	5,146	8,014	6,776	14,139
Total, 1st 40 institutions	638,287	634,020	536,764	505,863	405,511	402,308	342,565	335,543
41 Rutgers the State U NJ	8,245	6,734	9,336	5,946	4,232	3,914	6,614	2,588
42 U CA San Diego	8,133	8,250	7,104	7,166	5,888	5,733	4,848	5,192
43 Georgetown University	7,872	7,208	1,948	1,933	5,664	3,774	1,686	1,556
44 University of Virginia	7,769	7,866	9,174	7,120	5,005	5,820	7,408	5,188
45 U CA Los Angeles	7,570	9,175	7,327	7,961	4,765	5,400	5,141	4,248
46 U CA San Francisco	7,496	7,149	6,918	9,301	4,311	4,158	4,134	5,803
47 Yale University	7,381	10,299	10,621	11,340	6,268	8,592	7,242	7,697
48 Colorado State University	7,302	7,120	6,527	4,375	3,115	4,157	3,717	3,399
49 U CA Berkeley	7,277	7,509	6,348	6,718	4,196	4,769	4,256	4,662
50 US Naval Postgrad School	7,101 i	7,101	7,543	6,025	6,908 i	6,989	7,482	6,008
Total, 1st 50 institutions	714,433	712,431	609,610	573,748	455,863	455,614	395,093	381,884

See explanatory information and SOURCE at end of table.

Table B-69. Total and federally financed current fund expenditures for research equipment at universities and colleges: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
51 Florida International U	7,041	6,838	5,828	4,868	4,689	4,556	4,140	3,724
52 Case Western Reserve U	7,034	7,933	7,526	6,783	4,360	1,485	5,495i	4,997i
53 University of Miami	6,866	9,272	8,763	8,986	5,366	7,073	6,806	6,775
54 Arizona State University	6,494	8,584	7,068	5,669	3,160	1,877	2,396	2,179
55 University of Oklahoma	6,482	5,959	4,846	5,077	2,837	2,211	2,416	1,310
56 U of Alabama Birmingham	6,456	5,654	5,399	5,948	3,419	3,264	3,540	4,058
57 University of Connecticut	6,283	5,346	2,916	7,022	2,674	2,311	654	1,610
58 Wayne State University	6,094	6,256	4,254	4,694	1,371	1,151	1,042	1,190
59 U of Nebraska Lincoln	6,004	7,301	6,993	6,965	1,976	2,557	1,759	1,395
60 U of Tennessee System	5,980	6,378	6,795	7,824	2,623	2,586	2,952	2,998
Total, 1st 60 institutions	779,167	781,952	669,998	637,584	488,338	484,685	426,293	412,120
61 U of South Florida	5,913	5,460	4,446	3,465	2,238	2,046	1,438	886
62 New York University	5,879	8,787	5,855	5,254	1,758	2,716	2,248	4,704
63 U TX SW Med Ctr Dallas	5,809	6,162	5,284	6,431	3,144	2,929	1,677	1,383
64 Princeton University	5,710	7,154	6,085	5,732	4,995	6,130	4,516	3,808
65 University of Houston	5,670	4,394	2,766	4,659	1,865	2,156	1,410	2,495
66 Emory University	5,585	5,577	4,392	4,188	2,330	2,754	2,731	2,359
67 Iowa State University	5,554	7,333	7,385	6,175	1,473	2,547	1,879	1,870
68 U CA Irvine	5,552	3,253	4,283	5,099	2,861	2,028	2,567	3,420
69 U CA Davis	5,417	6,472	7,959	5,199	2,667	3,470	4,716	2,585
70 U MA Amherst	5,366	4,218	3,901	4,333	3,533	2,506	2,252	2,254
Total, 1st 70 institutions	835,622	840,762	722,354	688,119	515,202	513,967	451,727	437,884
71 U of Missouri Columbia	5,317	5,029	5,480	4,951	1,108	941	1,047	1,246
72 Syracuse University	5,296	4,907	5,085	2,531	757	669	669	681
73 U CA Santa Barbara	5,227	3,044	3,586	3,371	4,309	2,500	3,298	2,541
74 SUNY Stony Brook	5,199	6,023	7,026	6,709	4,226	3,842	4,449	4,227
75 Auburn University	5,081	4,893	5,735	3,591	2,327	1,421	1,881	540
76 University of IL Chicago	5,047	5,438	5,171	5,325	2,496	2,000	2,155	2,091
77 University of Kentucky	4,981	4,647	4,338	3,713	2,045	1,941	1,696	1,818
78 Mississippi State U	4,790	2,883	5,944	3,899	2,612	1,579	3,995	2,469
79 University of Pittsburgh	4,741	5,920	5,654	4,869	3,449	4,574	4,068	3,316
80 Kansas State University	4,720	6,019	5,197	4,250	2,384	3,478	2,089	2,087
Total, 1st 80 institutions	886,021	889,565	775,570	731,328	540,915	536,912	477,074	458,900
81 Baylor Col of Medicine	4,688	6,317	6,126	7,909	2,251	2,292	2,413	3,314
82 Oregon State University	4,639	5,097	4,565	4,253	3,824	4,184	3,647	2,975
83 University of Cincinnati	4,512	3,097	3,751	4,119	1,718	1,411	2,178	2,200
84 Illinois Inst of Tech	4,282	1,815	845	624i	2,214	1,557	782	480i
85 Clemson University	4,137	5,181	3,681	4,114	1,484	2,040	1,262	1,857
86 University of Delaware	4,133	4,319	3,266	3,934	1,753	2,253	1,598	1,551
87 Tufts University	4,071	2,292	2,236	2,262	3,530	1,912	1,667	1,428
88 New Mexico State Univ	3,977	4,243	5,728	6,192	3,262	3,501	5,115	5,714
89 The Rockefeller Univ	3,963	4,503	5,901	4,435	797	2,071	2,714	2,040
90 Boston University	3,960	3,615	2,002	3,205	3,469	3,110	1,699	2,570
Total, 1st 90 institutions	928,383	930,044	813,671	772,375	565,217	561,243	500,149	483,029
91 University of Notre Dame	3,934	3,822	4,039	5,346	2,593	2,543	2,694	3,749
92 Vanderbilt University	3,896	4,921	4,549	4,209	3,066	3,668	3,483	3,213
93 West Virginia University	3,895	3,441	4,229	4,546	3,248	2,912	3,614	3,995
94 Woods Hole Oceanograph	3,886	3,457	5,415	3,375	2,749	2,699	4,884	3,062
95 University of Kansas	3,732	3,386	3,456	3,281	2,025	2,059	1,714	1,759
96 SUNY Buffalo	3,688	5,412	5,425	4,530	2,203	3,564	3,710	3,514
97 Univ of Hawaii Manoa	3,676	4,170	0	378	1,901	3,211	0	29
98 Tulane University	3,560	4,283	3,902	2,303	2,512	2,797	2,212	1,283
99 Brown University	3,541	2,800	2,695	4,240	2,586	1,599	1,648	2,999
100 CUNY Hunter College	3,472	1,101	595	698	497	347	241	420
Total, 1st 100 institutions	965,663	966,837	847,976	805,281	588,597	586,642	524,349	507,052
Total, all other sampled insts	231,328	246,009	236,970	233,983	127,551	133,281	133,251	129,244
Estimated total non-sampled insts	23,532	21,444	19,298	0	12,939	9,023	10,103	0

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Table B-70. R&D expenditures at university-administered federally funded research and development centers, by character of work: fiscal years 1953-96

[Dollars in millions]

Fiscal year	Total	Character of work			
		Basic research		Applied research and development	
		Amount	Percent of total	Amount	Percent of total
1953	121	33	27.3	88	72.7
1954	141	39	27.7	102	72.3
1955	180	49	27.2	131	72.8
1956	194	51	26.3	143	73.7
1957	240	65	27.1	175	72.9
1958	293	78	26.6	215	73.4
1959	338	92	27.2	246	72.8
1960	360	97	26.9	263	73.1
1961	410	115	28.0	295	72.0
1962	470	136	28.9	334	71.1
1963	530	159	30.0	371	70.0
1964	629	191	30.4	438	69.6
1965	629	208	33.1	421	66.9
1966	630	227	36.0	403	64.0
1967	673	250	37.1	423	62.9
1968	719	276	38.4	443	61.6
1969	725	275	37.9	450	62.1
1970	737	269	36.5	468	63.5
1971	716	260	36.3	456	63.7
1972	753	244	32.4	509	67.6
1973	817	296	36.2	521	63.8
1974	865	390	45.1	475	54.9
1975	987	439	44.5	548	55.5
1976	1,147	512	44.6	635	55.4
1977	1,384	600	43.4	784	56.6
1978[1]	1,717	--	--	--	--
1979	1,935	1,022	52.8	913	47.2
1980	2,246	1,132	50.4	1,114	49.6
1981	2,486	1,270	51.1	1,216	48.9
1982	2,479	1,327	53.5	1,152	46.5
1983	2,737	1,484	54.2	1,253	45.8
1984	3,150	1,690	53.7	1,461	46.4
1985	3,523	1,765	50.1	1,758	49.9
1986	3,895	1,876	48.2	2,018	51.8
1987	4,206	2,033	48.3	2,173	51.7
1988	4,531	2,245	49.5	2,285	50.4
1989	4,730	2,352	49.7	2,377	50.3
1990	4,832	2,428	50.2	2,404	49.8
1991	5,078	2,595	51.1	2,484	48.9
1992	5,247	2,843	54.2	2,404	45.8
1993	5,295	2,938	55.5	2,357	44.5
1994	5,271	2,998	56.9	2,273	43.1
1995	5,363	2,742	51.1	2,622	48.9
1996	5,335	2,535	47.5	2,800	52.5

[1] Separate data for basic research and applied research and development were not collected for fiscal year 1978.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-71. R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	5,335,498	5,363,351	5,270,884	5,295,403	5,247,271	5,078,386	4,831,895	4,729,612
Engineering, total	1,849,617	1,939,425	1,786,215	1,713,257	1,804,266	1,788,516	1,708,098	1,642,799
Aeronautical and astronautical	333,856	339,325	223,562	158,952	162,722	156,265	143,643	145,035
Chemical	68,650	68,742	78,613	76,470	78,425	70,277	40,754	40,162
Civil	29,427	31,354	30,703	32,575	33,583	16,109	15,083	16,439
Electrical	468,574	460,668	508,204	534,275	597,540	638,886	604,894	568,626
Mechanical	520,438	535,102	502,033	417,492	468,827	487,644	545,093	628,057
Metallurgical and materials [1]	69,640	65,889	64,274	131,835	147,082	137,517	85,650	--
Other, n.e.c.	359,032	438,345	378,826	361,658	316,087	281,818	272,981	244,480
All sciences, total	3,485,881	3,423,926	3,484,669	3,582,146	3,443,005	3,289,870	3,123,797	3,086,813
Physical sciences	2,140,712	2,182,412	2,155,549	2,209,274	2,010,283	1,917,163	1,824,608	1,828,314
Astronomy	147,269	141,826	157,987	145,361	138,273	121,353	112,239	112,493
Chemistry	258,291	251,704	273,236	281,492	267,909	251,727	261,008	274,359
Physics	1,630,595	1,688,458	1,630,359	1,674,567	1,498,258	1,460,765	1,382,608	1,378,015
Other, n.e.c.	104,557	100,424	93,967	107,854	105,843	83,318	68,753	63,447
Environmental sciences	400,512	368,294	396,919	344,502	352,893	318,874	292,045	298,529
Atmospheric	208,820	187,953	183,995	156,327	149,233	125,612	103,239	98,594
Earth sciences	63,337	50,864	59,455	62,907	77,051	72,271	64,894	65,212
Oceanography	12,489	11,997	13,406	17,185	15,811	14,859	1,664	1,916
Other, n.e.c.	115,866	117,480	140,063	108,083	110,798	106,132	122,248	132,807
Mathematical sciences	98,501	83,330	113,971	119,938	124,313	132,222	135,374	128,664
Computer sciences	626,078	572,435	618,965	649,363	699,551	715,744	685,954	668,092
Life sciences	124,756	120,484	122,311	191,261	191,166	145,531	142,394	130,556
Agricultural sciences	1,286	1,067	1,216	1,077	1,153	1,041	1,017	1,175
Biological sciences	105,354	90,100	99,479	136,797	139,047	115,145	112,559	101,287
Medical sciences	11,937	20,875	13,059	14,897	16,250	11,355	10,345	10,114
Other, n.e.c.	6,179	8,442	8,557	38,490	34,716	17,990	18,473	17,980
Psychology	600	0	807	887	945	1,075	1,010	947
Social sciences	7,750	9,047	10,594	21,729	21,417	33,935	29,744	23,291
Economics	384	338	540	578	613	741	632	491
Political science	0	0	0	5,350	5,055	7,610	6,459	3,858
Sociology	0	0	0	0	0	0	0	0
Other, n.e.c.	7,366	8,709	10,054	15,801	15,749	25,584	22,653	18,942
Other sciences, n.e.c.	86,972	87,924	65,553	45,192	42,437	25,326	12,668	8,420

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

BEST COPY AVAILABLE

Table B-72. Federally financed R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal years 1989-96

[Dollars in thousands]

Field	1996	1995	1994	1993	1992	1991	1990	1989
Total	5,254,437	5,272,548	5,202,526	5,241,537	5,197,986	5,033,968	4,791,441	4,692,202
Engineering, total	1,829,249	1,914,876	1,769,468	1,700,839	1,794,182	1,778,686	1,699,463	1,633,585
Aeronautical and astronautical	332,847	338,161	222,178	158,832	162,602	156,108	143,495	144,910
Chemical	67,713	67,841	77,714	75,541	77,551	69,592	40,218	39,534
Civil	29,067	30,960	30,275	32,050	33,068	15,871	14,892	16,238
Electrical	462,651	453,185	503,721	531,629	595,600	636,548	602,489	566,345
Mechanical	513,525	525,487	497,730	415,151	467,487	486,112	543,687	624,909
Metallurgical and materials[1]	69,246	65,464	63,828	130,109	145,561	135,947	84,196	--
Other, n.e.c.	354,200	433,778	374,022	357,527	312,313	278,508	270,486	241,649
All sciences, total	3,425,188	3,357,672	3,433,058	3,540,698	3,403,804	3,255,282	3,091,978	3,058,617
Physical sciences	2,115,219	2,147,101	2,132,477	2,187,407	1,992,759	1,898,501	1,805,674	1,813,116
Astronomy	147,037	141,621	157,580	144,302	137,832	120,725	110,708	110,724
Chemistry	255,433	247,826	270,088	277,458	265,103	248,837	258,698	271,891
Physics	1,612,399	1,662,116	1,617,090	1,663,784	1,489,596	1,449,997	1,370,313	1,368,531
Other, n.e.c.	100,350	95,538	87,719	101,863	100,228	78,942	65,955	61,970
Environmental sciences	382,726	352,146	378,043	335,223	339,449	314,269	288,489	294,192
Atmospheric	194,896	176,071	169,125	149,637	138,362	123,624	101,226	96,625
Earth sciences	62,095	49,644	58,355	61,990	76,103	71,294	64,418	64,938
Oceanography	12,489	11,997	13,406	17,185	15,811	14,859	1,664	1,916
Other, n.e.c.	113,246	114,434	137,157	106,411	109,173	104,492	121,181	130,713
Mathematical sciences	96,973	81,796	112,468	118,872	123,471	131,130	134,246	127,724
Computer sciences	623,471	568,227	616,498	647,575	698,151	713,894	684,876	667,127
Life sciences	113,720	113,092	118,182	185,328	186,711	138,335	136,719	126,607
Agricultural sciences	1,286	1,067	1,216	1,077	1,153	1,041	1,017	1,175
Biological sciences	96,070	84,366	95,702	131,711	135,405	108,423	107,206	97,639
Medical sciences	10,234	19,277	12,784	14,619	15,987	11,161	10,304	10,061
Other, n.e.c.	6,130	8,382	8,480	37,921	34,166	17,710	18,192	17,732
Psychology	600	0	806	887	945	1,075	1,010	947
Social sciences	7,580	8,945	10,465	21,404	21,074	33,325	29,231	22,942
Economics	294	338	540	578	613	741	632	491
Political science	0	0	0	5,264	4,969	7,471	6,346	3,799
Sociology	0	0	0	0	0	0	0	0
Other, n.e.c.	7,286	8,607	9,925	15,562	15,492	25,113	22,253	18,652
Other sciences, n.e.c.	84,899	86,365	64,119	44,002	41,244	24,753	11,733	5,962

[1] Data for metallurgical and materials engineering were not collected separately prior to fiscal year 1990.

NOTE: Because of rounding, detail may not add to totals.

KEY: -- = not available
n.e.c. = not elsewhere classified

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996.

Table B-73. R&D expenditures at university-administered federally funded research and development centers, by science and engineering field: fiscal year 1996

[Dollars in thousands]

Institution and ranking	Total	Engineering	Physical sciences	Environmental sciences	Math & computer sciences	Life sciences	Psychology	Social sciences	Other sciences
Total, all institutions	5,335,498	1,849,617	2,140,712	400,512	724,579	124,756	600	7,750	86,972
1 Jet Propulsion Laboratory	1,089,420	530,730	94,731	77,434	386,525	0	0	0	0
2 Lawrence Livermore Lab	1,049,100	350,184	532,263	41,465	108,002	17,186	0	0	0
3 Los Alamos National Lab	1,019,512	483,957	365,244	0	95,443	4,384	0	7,082	63,402
4 Argonne Natl Laboratory	488,627	215,574	134,143	106,271	10,690	21,949	0	0	0
5 MIT Lincoln Laboratory	338,264	232,049	62,071	7,442	36,702	0	0	0	0
6 Lawrence Berkeley Lab	304,180	10,280	153,074	17,705	48,091	51,975	0	0	23,055
7 Fermi Natl Accel Lab[2]	264,325	0	264,325	0	0	0	0	0	0
8 Brookhaven Natl Lab[1]	234,618	20,308	168,613	14,415	1,161	28,458	600	578	485
9 Natl Ctr Atmos Res[3]	132,394	0	0	132,394	0	0	0	0	0
10 Stanford Linear Accel Ctr	119,606	0	119,606	0	0	0	0	0	0
Total, 1st 10 institutions	5,040,046	1,843,082	1,894,070	397,126	686,614	123,952	600	7,660	86,942
11 T J Natl Accel Facility	73,658	0	73,658	0	0	0	0	0	0
12 Plasma Physics Lab	61,313	0	61,313	0	0	0	0	0	0
13 Natl Optical Astro Obs[4]	46,995e	0	46,995e	0	0	0	0	0	0
14 Software Engineering Inst	33,675	0	0	0	33,675	0	0	0	0
15 Natl Radio Astron Obs[1]	30,832	0	30,832	0	0	0	0	0	0
16 Ames Laboratory	30,075	6,535	19,250	0	4,290	0	0	0	0
17 Natl Astron & Ionos Ctr	17,951	0	14,565	3,386	0	0	0	0	0
18 Oak Ridge Assoc Univ[5]	953	0	29	0	0	804	0	90	30
Total, 1st 18 institutions	5,335,498	1,849,617	2,140,712	400,512	724,579	124,756	600	7,750	86,972

[1] Associated Universities, Inc

[2] Universities Research Association

[3] University Corporation for Atmospheric Research

[4] Association of Universities for Research in Astronomy, Inc

[5] Oak Ridge Associated Universities

NOTE: Because of rounding, detail may not add to totals

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

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Table B-74. Total and federally financed R&D expenditures at university-administered federally funded research and development centers: fiscal years 1993-96

[Dollars in thousands]

Institution and ranking	Total				Federally financed			
	1996	1995	1994	1993	1996	1995	1994	1993
Total, all institutions	5,335,498	5,363,351	5,270,884	5,295,403	5,254,437	5,272,548	5,202,526	5,241,537
1 Jet Propulsion Laboratory	1,089,420	1,099,180	1,049,345	1,100,529	1,089,420	1,099,180	1,049,345	1,100,529
2 Lawrence Livermore Lab	1,049,100	893,716	904,800	998,649	1,029,957	859,786	897,111	995,083
3 Los Alamos National Lab	1,019,512	1,109,400	1,089,800	1,084,200	1,008,000	1,096,000	1,075,000	1,066,887
4 Argonne Natl Laboratory	488,627	508,663	499,168	447,880	476,542	496,431e	487,164	436,933
5 MIT Lincoln Laboratory	338,264	344,657	341,929	355,197	334,038	340,896	338,236	355,197
6 Lawrence Berkeley Lab	304,180	258,804	273,000	262,679e	287,011	244,361	258,820e	250,177e
7 Fermi Natl Accel Lab[2]	264,325	258,408	235,773	200,698	264,325	258,408	235,773	200,698
8 Brookhaven Natl Lab[1]	234,618	281,148	286,625	293,093	234,618	281,148	286,625	293,093
9 Natl Ctr Atmos Res[3]	132,394	125,310	118,247	98,627	118,965	113,797	103,601	92,040
10 Stanford Linear Accel Ctr	119,606	126,115	124,421	137,081	119,606	126,115	124,421	137,081
Total, 1st 10 institutions	5,040,046	5,005,401	4,923,108	4,978,633	4,962,482	4,916,122	4,856,096	4,927,718
11 T J Natl Accel Facility	73,658	74,015	54,614	34,924	70,947	72,794	53,789	34,155
12 Plasma Physics Lab	61,313	125,685	102,325	116,354	60,978	125,621	102,195	115,841
13 Natl Optical Astro Obs[4]	46,995e	45,005e	73,104	40,135	46,995e	45,005e	73,104	40,135
14 Software Engineering Inst	33,675	31,525	32,893	35,149	33,675	31,525	32,893	35,149
15 Natl Radio Astron Obs[1]	30,832	33,047	29,940	28,412	30,675	32,920	29,743	27,803
16 Ames Laboratory	30,075	31,925	31,993	34,262	30,075	31,925	31,993	34,262
17 Natl Astron & Ionos Ctr	17,951	15,647	12,800	10,990	17,806	15,625	12,682	10,843
18 Oak Ridge Assoc Univ[5]	953	1,101	10,107	11,108	804	1,011	10,031	11,048
Total, 1st 18 institutions	5,335,498	5,363,351	5,270,884	5,289,967	5,254,437	5,272,548	5,202,526	5,236,954
Total, all other sampled insts.	0	0	0	5,436	0	0	0	4,583

1 Associated Universities, Inc

2 Universities Research Association

3 University Corporation for Atmospheric Research

4 Association of Universities for Research in Astronomy, Inc

5 Oak Ridge Associated Universities

NOTE: Because of rounding, detail may not add to totals

KEY: -- = not available
e = estimated
i = imputed

SOURCE: National Science Foundation/SRS, Survey of Research and Development Expenditures at Universities and Colleges, Fiscal Year 1996

SECTION C.

UNIVERSITY-ADMINISTERED FEDERALLY FUNDED RESEARCH AND DEVELOPMENT CENTERS: FY 1996

Department of Defense

Lincoln Laboratory
(Massachusetts Institute of Technology)
Software Engineering Institute
(Carnegie Mellon University)

Department of Energy

Ames Laboratory
(Iowa State University of Science and Technology)
Argonne National Laboratory
(University of Chicago and Argonne Universities Association)
Brookhaven National Laboratory
(Associated Universities, Inc.)
Continuous Electron Beam Accelerator Facility
(Southeastern Universities Research Association)
E.O. Lawrence Berkeley Laboratory
(University of California)
E.O. Lawrence Livermore Laboratory
(University of California)
Fermi National Accelerator Laboratory
(Universities Research Association)
Los Alamos National Laboratory
(University of California)
Oak Ridge Institute of Science and Education
(Oak Ridge Associated Universities)
Plasma Physics Laboratory
(Princeton University)
Stanford Linear Accelerator Center
(Stanford University)

National Aeronautics and Space Administration

Jet Propulsion Laboratory
(California Institute of Technology)

National Science Foundation

National Astronomy and Ionosphere Center
(Cornell University)
National Center for Atmospheric Research
(University Corporation for Atmospheric Research)
National Optical Astronomy Observatory
(Association of Universities for Research in Astronomy, Inc.)
National Radio Astronomy Observatory
(Associated Universities, Inc.)

191

Section D.

Survey Instruments

SURVEY INSTRUMENTS—TABLE OF CONTENTS

Item	*Page*
Cover letter	197
Survey form and crosswalk	200
Optional survey form	207

NATIONAL SCIENCE FOUNDATION
4201 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22230

Dear Colleague:

The National Science Foundation (NSF) requests your participation in its annual Survey of Research and Development Expenditures at Universities and Colleges (R&D expenditures survey), Fiscal Year (FY) 1996. This national survey, one of a series on academic science and engineering (S&E) resources, collects data on current fund expenditures for separately budgeted research and development by S&E field and source of funds, and on current fund expenditures for related research equipment. Members of Congress, Federal and State governmental planners, and officials in the academic sector use the data to assess the adequacy of the Nation's research base. By contributing timely and accurate information to this survey, you can ensure that your institution is represented in data used by these decision makers. You may also find the data useful to your own institution for internal and/or peer analyses.

These data are solicited under the authority of the National Science Foundation Act of 1950, as amended. The survey covers U.S. institutions that currently have doctoral programs in S&E fields and/or annually perform at least $50,000 in separately budgeted research and development S&E activities. While participation is voluntary and failure to respond will not have any adverse effect upon your institution, the reliability of the data and therefore the soundness of institutional, State, and national decisions based upon them are in large measure contingent upon receipt of complete and accurate data from all surveyed institutions. **The survey questionnaire is due February 7, 1997.**

This packet contains the following items:

1. Postcard to acknowledge that you have received this package
2. FY 1996 R&D expenditures survey questionnaire (NSF Form 411), with instructions and NSF/NCES Crosswalk
3. FY 1996 Optional Item survey form
4. "FYI" flyer describing the NSF academic survey system
5. Facsimile showing data reported for your institution on the FY 1993–95 surveys
6. Question-and-Answer booklet
7. Automated Survey Questionnaire (ASQ) diskette, with instructions
8. Envelope for returning the completed survey questionnaire

Please let us know if your package is not complete.

POSTCARD

Please take a moment to let us know you have received this package by completing and mailing the enclosed postcard, giving the name and telephone number of the person responsible for completing the survey form.

FY 1996 SURVEY QUESTIONNAIRE (NSF FORM 411) WITH INSTRUCTIONS AND NSF/NCES CROSSWALK

The data items requested on the enclosed FY 1996 questionnaire are the same as those requested for FY 1995. However, a question on pass-through R&D funding to subrecipients, previously included as an optional item, has been added to the full questionnaire (item 1A). The Crosswalk shown on the last two pages of the questionnaire maps NSF's fields of science and engineering to

corresponding codes defined by the Department of Education's National Center for Education Statistics (NCES) in *A Classification of Instructional Programs*. Respondents whose institution's records systems use the NCES classification should find the Crosswalk useful.

To help us monitor survey response burden, we ask you to estimate and report the number of hours you needed to complete the survey.

OPTIONAL ITEM 3A SURVEY FORM

To help NSF better understand what is being reported as current expenditures for research equipment funds, please complete the optional item 3A and return it with the survey questionnaire. This format may become part of the survey questionnaire in FY 1997 but remains optional this year. All data reported by individual institutions on the optional item are STRICTLY CONFIDENTIAL. These data will not be published nor made available at any level to the public; they will be used only for internal analyses.

AUTOMATED SURVEY QUESTIONNAIRE

A diskette is enclosed containing the Automated Survey Questionnaire, which provides you with a more convenient way to report your data. The ASQ allows you to check your responses for both arithmetic and trend errors before returning your report to NSF. To use the automated questionnaire, you will need an IBM PC or compatible computer system and DOS 3.0 or a more recent upgrade.

WORLD WIDE WEB

An R&D expenditures survey home page is now available through the World Wide Web on the Internet. The page contains information about the survey and provides direct access to publications and data. To reach it, direct your browser to the following URL address: *http://www.nsf.gov/sbe/srs/stats.htm*, and move down to select the Survey of Scientific and Engineering Expenditures at Universities and Colleges under the heading, Statistical Reports on Research and Development Funding and Performance. We would be very interested in hearing your comments or suggestions about the project.

FOR MORE INFORMATION

Please review the enclosed Question-and-Answer booklet, which contains useful information for completing the survey. If you have questions about the survey or would like information about our publications or data, please call Marge Machen of NSF at (703) 306-1772 or Atessa Shahmirzadi of Quantum Research Corporation at (301) 657-3077, ext. 140.

If you prefer to submit your data electronically (either in a layout similar to the questionnaire or in ASQ format), please send e-mail to kgreenbe@qrc.com.

Thank you for your efforts in providing timely and meaningful statistics to NSF.

Sincerely,

John E. Jankowski, Jr.

John E. Jankowski, Jr., Program Director
Research and Development Statistics Program
Division of Science Resources Studies

Enclosures

NSF Form 411 (12-96)

FORM APPROVED
OMB No. 3145-0100
Expiration Date: 12/31/98

NATIONAL SCIENCE FOUNDATION
ARLINGTON, VA 22230

SURVEY OF RESEARCH AND DEVELOPMENT EXPENDITURES AT UNIVERSITIES AND COLLEGES, FY 1996

Organizations are requested to complete and return this form to:

Quantum Research Corporation
7315 Wisconsin Avenue, Suite 400W
Bethesda, MD 20814-3202

If you prefer, your response to the survey may be sent by e-mail to:
kgreenbe@qrc.com

This form should be returned by February 7, 1997.

Your cooperation in returning the survey questionnaire promptly is very important.

This information is solicited under the authority of the National Science Foundation Act of 1950, as amended. Your response is entirely voluntary and your failure to provide some or all of the information will in no way adversely affect your institution.

All financial data requested on this form should be reported in thousands of dollars; for example, an expenditure of $25,342 should be rounded to the nearest thousand dollars and reported as $25.

Where exact data are not available, estimates are acceptable. Your estimates will be better than ours.

Include data for branches and all organizational units of your institution, such as medical schools and agricultural experiment stations. Data on research centers and facilities administered by your institution should be included. In addition, include hospitals or clinics owned, operated, or controlled by universities, and integrated operationally with the clinical programs of your medical schools. **Exclude** data for federally funded research and development centers (FFRDCs). Data for these facilities are collected separately.

Please correct if name or address has changed

If you have any questions please contact Marge Machen of NSF at (703) 306-1772, or Kevin Greenberg of QRC at (301) 657-3077, ext. 180.

Financial data are requested for your institution's 1996 fiscal year.
Please circle the month in which your institution's fiscal year begins

1 JAN 2 3 4 5 6 7 8 9 10 11 12 DEC

It is estimated that response to this survey will require 18 hours. If you wish to comment on this burden, please contact Herman Fleming of NSF at (703) 306-1243.

How many person hours were required to complete this form? _____

Date submitted _____

Scope:

This survey collects data on expenditures by universities and colleges for separately budgeted research and development (R&D) in science and engineering. Definitions used are compatible with OMB Circular A-21, revised April 26, 1996. Items 1 and 2 ask for *current fund expenditures* by source of funds and by field of science and engineering. Item 3 collects data on that *portion of current fund expenditures* reported in items 1 and 2 that went for the purchase of scientific and engineering research equipment.

Definitions:

Research and Development (R&D). R&D for purposes of this survey is the same as "organized research" as defined in Section B.1.b. of OMB Circular A-21 (revised). It includes all R&D activities of an institution that are *separately budgeted and accounted for*. R&D includes both "sponsored research" activities (sponsored by Federal and non-Federal agencies and organizations) and "university research" (separately budgeted under an internal application of institutional funds).

Research is systematic study directed toward fuller knowledge or understanding of the subject studied. Research is classified as either basic or applied, according to the objectives of the investigator.

Development is systematic use of the knowledge or understanding gained from research, directed toward the production of useful materials, devices, systems, or methods, including design and development of prototypes and processes.

Current fund expenditures. These are expenditures of funds available for current operations. Such expenditures include all unrestricted gifts and restricted current funds to the extent that such funds were expended for current operating purposes.

PERSON WHO SUBMITTED THIS FORM (PLEASE TYPE OR PRINT)

NAME:	TELEPHONE NUMBER:
TITLE:	E-MAIL:

PERSON WHO PREPARED THIS FORM (IF DIFFERENT FROM ABOVE)

NAME:	TELEPHONE NUMBER:
TITLE:	E-MAIL:

Instructions for Items 1 and 2

Separately budgeted research and development (R&D) includes all funds expended for activities specifically organized to produce research outcomes and commissioned by an agency either external to the institution or separately budgeted by an organizational unit within the institution. *Include* research equipment purchased under research project awards from "current fund" accounts. Also *include* research funds for which an outside organization, educational or other, is a subrecipient. *Exclude* training grants, public service grants, demonstration projects, clinical trials, and departmental research expenditures that are not separately budgeted. Also, *exclude* any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, as well as all other non-science fields. Allocate funding to the original sources whenever possible, as specified below. If this information is unknown, report the proximate funding source.

Total

a. ***Federal Government.*** Report awards for R&D (including direct and reimbursed indirect costs) by all agencies of the Federal Government.

b. ***State and local governments.*** Include funds for R&D (including direct and reimbursed indirect costs) from State, county, municipal, or other local governments and their agencies. Include here State funds that support R&D at agricultural and other experiment stations.

c. ***Industry.*** Include all awards for R&D (including direct and reimbursed indirect costs) from profit-making organizations, whether engaged in production, distribution, research, service, or other activities. Do not include awards from nonprofit foundations financed by industry; these should be reported under "All other sources" (line 1175).

d. ***Institution funds.*** Report funds, including related indirect costs, that your institution spent for R&D activities from the following unrestricted sources: general-purpose State or local government appropriations; general-purpose awards from industry, foundations, or other outside sources; tuition and fees, endowment income, gifts, and other institutional funds. In addition, estimate your institution's on-campus and off-campus unreimbursed indirect costs associated with externally funded R&D projects, including mandatory and voluntary cost sharing. To estimate unreimbursed indirect costs, preferably on a project-by-project basis, use your appropriate on-campus or off-campus ***negotiated research indirect cost rate(s)*** multiplied by the corresponding base(s) minus actual indirect cost recovery.

e. ***All other sources.*** Include awards for R&D (including direct and reimbursed indirect costs) from nonprofit foundations and voluntary health agencies as well as from all other sources not elsewhere classified. Funds from foundations that are affiliated with, or granted solely to your institution, should be included under line 1160, "Institution funds." Funds for R&D received from a health agency that is a unit of a State or local government should be reported under "State and local governments" (line 1125). Also include gifts from individuals that are restricted by the donor to research.

ITEM 1. CURRENT FUND EXPENDITURES FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING, BY SOURCE OF FUNDS: FY 1996 (Include indirect costs)

Source of Funds	Line No.	(1) Total (Dollars in Thousands)	(2) Percentages of Total & Federal Funds That Are Basic Research
a. Federal Government	1110	$	_____ %
b. State and local governments	1125		
c. Industry	1150		
d. Institution funds (sum of lines 1161 and 1162)	1160		
(1) Institutionally financed organized research	1161		
(2) Unreimbursed indirect costs and related sponsored research	1162		
e. All other sources	1175		
f. TOTAL (sum of a through e)	1100	$	_____ %

BASIC RESEARCH
Please provide the percentages of total and Federal expenditures that are basic research (not applied research) as defined in column (2).

Basic research is directed toward an increase of knowledge; it is research where the primary aim of the **investigator** is a fuller knowledge or understanding of the subject under study rather than a specific application thereof.

CONFIDENTIALITY
Information received from individual institutions in lines 1161 and 1162, estimates for basic research expenditures, or data provided in item 1A will NOT be published or released; only aggregate totals will appear in tabulations.

ITEM 1A. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT IN THE SCIENCES AND ENGINEERING PASSED THROUGH THE INSTITUTION TO SUBRECIPIENTS

How much of your total R&D (line 1100) and Federal R&D (line 1110) expenditures was passed through by your institution to subrecipients?

Subrecipients	Line No.	Dollars in Thousands	
		(1) Total	(2) Federal
Educational subrecipients	1910		
Other subrecipients	1920		
Total	1900		

For Federal awards, **subrecipient** means the entity that expends Federal awards received from a pass-through entity to carry out a Federal program, but does not include an individual that is a beneficiary of such a program. A subrecipient may also be a recipient of other Federal awards directly from a Federal awarding agency. *—OMB Circular A-133, Section .105 (revised April 22, 1996)* For awards from nonfederal sources, the subrecipient definition is analogous to the Federal one.

Educational [subrecipients] refers to all academic colleges and universities and all units owned, operated, and controlled by such institutions.

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ITEM 2. CURRENT FUND EXPENDITURES (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE & ENGINEERING: FY 1996 (Include indirect costs)

Please note that total R&D expenditures in line 1400, column (1) should be the same as reported in item 1, line 1100, column 1.

Federally financed R&D expenditures in line 1400, column (2) should be the same as reported in item 1, line 1110, column 1.

Field of science & engineering	Line No.	(Dollars in thousands)	
		(1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1410	$	$
(1) Aeronautical & astronautical	1411		
(2) Chemical	1412		
(3) Civil	1413		
(4) Electrical	1414		
(5) Mechanical	1415		
(6) Metallurgical & materials	1417		
(7) Other	1416		
b. PHYSICAL SCIENCES (TOTAL)	1420		
(1) Astronomy	1421		
(2) Chemistry	1422		
(3) Physics	1423		
(4) Other	1424		
c. ENVIRONMENTAL SCIENCES (TOTAL)	1430		
(1) Atmospheric	1431		
(2) Earth sciences	1432		
(3) Oceanography	1433		
(4) Other	1434		
d. MATHEMATICAL SCIENCES (TOTAL)	1441		
e. COMPUTER SCIENCES (TOTAL)	1442		
f. LIFE SCIENCES (TOTAL)	1450		
(1) Agricultural	1451		
(2) Biological	1452		
(3) Medical	1453		
(4) Other	1454		
g. PSYCHOLOGY (TOTAL)	1460		
h. SOCIAL SCIENCES (TOTAL)	1470		
(1) Economics	1471		
(2) Political science	1472		
(3) Sociology	1473		
(4) Other	1474		
i. OTHER SCIENCES, not elsewhere classified (TOTAL)	1480		
j. TOTAL (sum of a through i)	1400	$	$

Please EXCLUDE from your response any R&D expenditures in the fields of education, law, humanities, music, the arts, physical education, library science, and all other non-science and engineering fields.

ITEM 3. CURRENT FUND EXPENDITURES FOR RESEARCH EQUIPMENT (TOTAL AND FEDERALLY FINANCED) FOR SEPARATELY BUDGETED RESEARCH AND DEVELOPMENT, BY FIELD OF SCIENCE & ENGINEERING: FY 1996

Please report that ***portion*** of current fund expenditures reported in items 1 and 2 that went for the purchase of research equipment. This includes all research equipment purchased under sponsored research project awards from current fund accounts.

For column (1) report current fund expenditures for R&D from all sources: Federal Government, State, county, municipal or other governments and their agencies (including State funds supporting R&D at agricultural experiment stations); industry; institution funds; and private foundations and voluntary health agencies, individuals, and associations.

For column (2) include funds from awards for R&D sponsored by agencies of the Federal Government.

Field of science & engineering	Line No.	(Dollars in thousands)	
		(1) Total	(2) Federal
a. ENGINEERING (TOTAL)	1810	$	$
(1) Aeronautical & astronautical	1811		
(2) Chemical	1812		
(3) Civil	1813		
(4) Electrical	1814		
(5) Mechanical	1815		
(6) Metallurgical & materials	1817		
(7) Other	1816		
b. PHYSICAL SCIENCES (TOTAL)	1820		
(1) Astronomy	1821		
(2) Chemistry	1822		
(3) Physics	1823		
(4) Other	1824		
c. ENVIRONMENTAL SCIENCES (TOTAL)	1830		
(1) Atmospheric	1831		
(2) Earth sciences	1832		
(3) Oceanography	1833		
(4) Other	1834		
d. MATHEMATICAL SCIENCES (TOTAL)	1841		
e. COMPUTER SCIENCES (TOTAL)	1842		
f. LIFE SCIENCES (TOTAL)	1850		
(1) Agricultural	1851		
(2) Biological	1852		
(3) Medical	1853		
(4) Other	1854		
g. PSYCHOLOGY (TOTAL)	1860		
h. SOCIAL SCIENCES (TOTAL)	1870		
(1) Economics	1871		
(2) Political science	1872		
(3) Sociology	1873		
(4) Other	1874		
i. OTHER SCIENCES, not elsewhere classified (TOTAL)	1880		
j. TOTAL (sum of a through i)	1800	$	$

Current fund expenditures in each field for scientific research equipment is that PORTION or SUBTOTAL of the amounts reported in the corresponding cells of the "Total" and "Federal" columns in item 2.

CROSSWALK BETWEEN NSF FIELDS OF SCIENCE & ENGINEERING AND THE NATIONAL CENTER FOR EDUCATION STATISTICS (NCES) CLASSIFICATION OF INSTRUCTIONAL PROGRAMS

The left-hand column shows each of the detailed fields as displayed on the questionnaire form. The right-hand column shows the NCES fields that are included within the NSF category as well as some additional illustrative disciplines. These additional disciplines are intended to be guidelines—not sharp definitions—as to what should be reported under a particular field.

Questionnaire Field	NCES Classification and Additional Illustrative Disciplines
a. ENGINEERING **(1) Aeronautical and Astronautical**	14.02 Aerospace, Aeronautical, and Astronautical Engineering (also aerodynamics, space technology)
(2) Chemical	03.0509 Wood Science (also petroleum refining process) 14.07 Chemical Engineering 14.32 Polymer/Plastics Engineering 14.25 Petroleum Engineering
(3) Civil	04.02 Architecture 14.04 Architectural Engineering 14.08 Civil Engineering 14.14 Environmental/Environmental Health Engineering (also geotechnical, hydraulic, hydrologic, sanitary and environmental, structural, transportation)
(4) Electrical	14.09 Computer Engineering (also power engineering) 14.10 Electrical, Electronics, and Communications Engineering
(5) Mechanical	14.11 Engineering Mechanics 14.19 Mechanical Engineering
(6) Metallurgical & Materials	14.06 Ceramic Sciences and Eng 14.15 Geological Engineering 14.16 Geophysical Engineering 14.18 Materials Engineering 14.20 Metallurgical Engineering 14.21 Mining and Mineral Eng 14.28 Textile Sciences and Eng 14.31 Materials Science 40.0701 Metallurgy (also welding)
(7) Other	14.01 Engineering, General 14.03 Agricultural Engineering 14.05 Bioengineering and Biomedical Engineering 14.12 Engineering Physics 14.13 Engineering Science 14.17 Industrial/Manufacturing Eng 14.22 Naval Architecture and Marine Engineering 14.23 Nuclear Engineering 14.24 Ocean Engineering 14.27 Systems Engineering 14.29 Engineering Design 14.30 Eng./Industrial Management 14.99 Engineering, Other 30.06 Systems Science and Theory (also marine and ocean engineering systems)
b. PHYSICAL SCIENCES **(1) Astronomy**	40.02 Astronomy 40.03 Astrophysics (also Gamma-ray, neutrino, optical and radio, X-ray)
(2) Chemistry	40.05 Chemistry (also analytical, inorganic, organic, organo-metallic, pharmaceutical, physical, polymer sciences (except biochemistry))
(3) Physics	40.08 Physics (also acoustics, atomic/molecular, chemical, condensed matter, elementary particles, nuclear structure, optics, plasma, theoretical/mathematical)
(4) Other	40.01 Physical Sciences, General 40.0799 Miscellaneous Physical Sciences, Other 40.99 Physical Sciences, Other (used for multidisciplinary projects within physical sciences and for disciplines not requested separately)
c. ENVIRONMENTAL SCIENCES (Earth, Atmospheric, & Ocean) **(1) Atmospheric**	40.04 Atmospheric Sciences and Meteorology (also aeronomy, extraterrestrial atmospheres, solar, weather modification)
(2) Earth Sciences	15.1102 Surveying 40.06 Geological and Related Sciences 40.0703 Earth & Planetary Sciences 45.0702 Cartography (also engineering geophysics, general geology, geodesy and gravity, geomagnetism, hydrology, inorganic, isotopic, lab geophysics, organic geochemistry, paleomagnetism, paleontology, physical geography, seismology)
(3) Oceanography Sciences	26.0607 Marine/Aquatic Biology 40.0702 Oceanography (also biological, chemical, geological, physical)
(4) Other	(used for multidisciplinary projects within Earth, Atmospheric, and Ocean Sciences)
d. MATHEMATICAL SCIENCES	27.01 Mathematics, General 27.03 Applied Mathematics 27.0302 Operations Research 27.05 Mathematical Statistics 27.99 Mathematics, Other 30.08 Math./Computer Sciences (also algebra, analysis, foundations and logic, geometry, numerical analysis, topology)
e. COMPUTER SCIENCES	11 Computer and Information Science, General 52.1201 Management Information Systems (also design, development, and application of computer capabilities to data storage and manipulation, information science)

Questionnaire Field	NCES Classification and Additional Illustrative Disciplines (cont.)
f. LIFE SCIENCES **(1) Agricultural**	01.03 Agricultural Production; 01.0303 Aquaculture; 01.07 International Agriculture 02.01 Agricultural Sciences; 02.04 Plant Sciences; 02.05 Soil Science 03 Renewable Natural Resources; 04.06 Landscape Architecture (also agricultural chemistry, agronomy, animal science, conservation, fish and wildlife, forestry, horticulture)
(2) Biological	19.05 Foods and Nutrition Studies; 26.01 Biology, General; 26.0202 Biochemistry 26.0203 Biophysics; 26.03 Botany; 26.04 Cell and Molecular Biology 26.05 Microbiology/Bacteriology; 26.0601 Anatomy; 26.0603 Ecology 26.0609 Nutritional Sciences; 26.0610 Parasitology; 26.0612 Toxicology 26.0613 Genetics, Plant and Animal; 26.0614 Biometrics; 26.0615 Biostatistics 26.0699 Misc. Bio. Specializations, Other; 26.0701 Zoology; 26.0702 Entomology 26.0704 Pathology, Human and Animal; 26.0705 Pharmacology, Human and Animal; 26.0706 Physiology, Human and Animal 26.0799 Zoology, Other 26.99 Biolog./Life Sciences, Other; 51.1301 Medical Anatomy; 51.1302 Medical Biochemistry 51.1307 Medical Immunology; 51.1308 Medical Microbiology; 51.1312 Medical Pathology 51.1313 Medical Physiology; 51.1314 Medical Toxicology; 51.2203 Epidemiology (also allergies and immunology, biogeography, biotechnology, pathology, physical anthropology, virology)
(3) Medical	26.0608 Neurosciences; 26.0611 Radiation Biology/Radiobiol.; 51.04 Dentistry 51.1201 Medicine, General; 51.1399 Med. Basic Sciences, Other; 51.1610 Nursing Psychiatry/Mental Health 51.17 Optometry; 51.19 Osteopathic Medicine 51.20 Pharmacy; 51.21 Podiatry; 51.22 Public Health 51.24 Veterinary Medicine[1] Anesthesiology; Cardiology; Colon and Rectal Surgery Dental/Oral Surgery; Dermatology; Family Medicine Gastroenterology; General Surgery; Geriatric Medicine Hematology; Internal Medicine; Medical Programs, Other Neonatal-Perinatal Medicine; Neurological Surgery; Neurology Nuclear Medicine; Nuclear Radiology; Obstetrics and Gynecology Oncology; Ophthalmology; Orthopedics/Orthopedic Surgery Otorhinolaryngology; Pediatrics; Pharmacology Physical and Rehabilitative Medicine; Plastic Surgery; Preventive Medicine Psychiatry; Thoracic Surgery; Urology (exclude all residency programs)
(4) Other	30.11 Gerontology; 51.02 Communication Disorders Sciences and Services; 51.07 Health and Medical Administrative Services 51.10 Health and Medical Laboratory Technologies; 51.16 Nursing Technologies; 51.2306 Occupational Therapy 51.2308 Physical Therapy; 51.2399 Rehab./Therapeutic Services; 51.99 Health Professions and Related Services, Other (used for multidisciplinary projects within life sciences)
g. PSYCHOLOGY	42.01 Psychology, General; 42.02 Clinical Psychology; 42.17 School Psychology 51.2301 Art Therapy (also animal behavior, educational, experimental, human development and personality, social)
h. SOCIAL SCIENCES **(1) Economics**	01.0103 Agricultural Economics; 45.06 Economics; 52.06 Business/Managerial Econ. (also applied, development, econometrics, industrial, international, labor, public finance and fiscal policy, quantitative, resource)
(2) Political Science	44.04 Public Administration; 44.05 Public Policy Analysis 44.99 Public Admin. and Services, Other; 45.09 International Relations and Affairs 45.10 Political Science and Government (also comparative government, legal systems, political theory, regional studies)
(3) Sociology	45.02 Anthropology (Social and Cultural only); 45.05 Demography and Population Studies; 45.11 Sociology (also comparative and historical, complex organizations, cultural and social structure, group interactions, social problems and welfare theory)
(4) Other	04.03 City/Urban, Community, and Regional Planning; 05 Area and Ethnic Studies; 16.0102 Linguistics 43.01 Crim'l. Justice & Corrections; 44.02 Community Services 45.01 Social Sciences, General; 45.03 Archaeology; 45.07 Geography 45.12 Urban Studies/Affairs; 45.99 Social Sciences, Other (also history of science, socioeconomic geography)
i. OTHER SCIENCES, n.e.c.	(used when the multidisciplinary and interdisciplinary aspects make the classification under one primary field impossible)

[1] Institutions with schools of veterinary medicine should distribute R&D expenditures among the appropriate disciplines (agricultural, biological, and medical) rather than only in medical sciences.

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Survey of Research and Development Expenditures at Universities and Colleges, FY 1996

OPTIONAL ITEM 3A

Current Fund Expenditures for Research Equipment, FY 1996

The National Science Foundation is continuing its evaluation of data provided in item 3 of its Survey of Research and Development Expenditures at Universities and Colleges (R&D expenditures survey). To help NSF better understand what is being reported as current fund expenditures for research equipment, please complete the optional item printed below.

OPTIONAL ITEM 3A

For reporting on item 3 of this survey, does your institution use a specific dollar cutoff to classify current fund expenditures as expenditures for research equipment?

NO _____

YES _____ If yes, the cutoff level is: $ _____

Comments: _____

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